JULY 1961

INDUSTRIAL DEVELOPMENT

AND MANUFACTURERS RECORD

THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION

REFERENCE STUDIES

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General Tire and Rubber's President Michael G. O'Neil points out, beginning on page 9, that a rapidly growing company needs the advice of many of its departments in planning new facilities.

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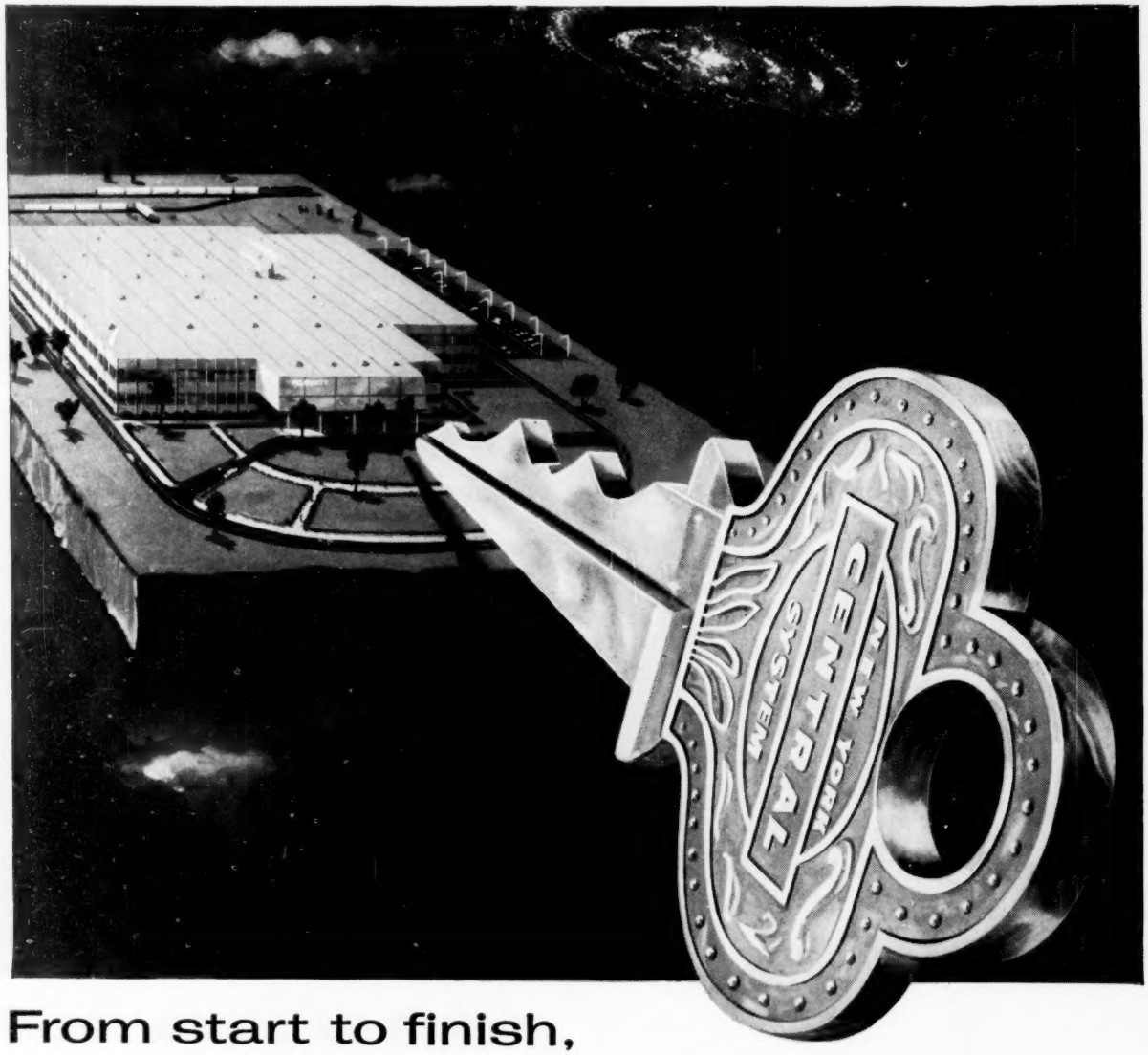

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DEVELOPMENT

AND MANUFACTURERS RECORD

VOLUME 130 • JULY 1961 • NUMBER 8

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OFFICIAL PUBLICATION OF THE INDUSTRIAL DEVELOPMENT RESEARCH COUNCIL

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CHECK POINTS

Almost every day, the material flowing across our desk reminds us that industrial development is getting to be an almost universal activity. For example, a recent letter from Governor Peter Tali Coleman in Pago Pago reveals that American Samoa — roughly midway between Hawaii and Australia — is undertaking a development plan. A jet airstrip to be completed in 1962 is expected to result in a large increase in tourist and other traffic.

According to Coleman "it would appear that the greatest opportunities for development are in the field of services required by tourists, such as hotels and restaurants. At present there are no hotels in Samoa except for a small Government-owned transient facility."

At present, Samoa's only major industry is tuna canning, which employs about 350 people. The Government has recently passed an Industrial Incentive Act, however, designed to promote further industrial activity. Among features of this plan is a ten-year graduated tax exemption.

* * *

A report on development plans for Iran comes from our good friend A. V. K. Babcock, Arizona utility executive who recently took part in a trade mission to the Middle East. Some excerpts:

"In the past 5 years (under a second Seven Year Program), the Iranian government has built many industrial and municipal plants to demonstrate to its people what can be done. This they felt, would establish a pattern for private initiative, which it certainly has done.

Members of the U.S. Trade Mission to Iran sign His Imperial Majesty's Guest Book at the Marble Palace on arrival in Tehran. From left to right Ambassador Edward T. Wailes, Adrian V. K. Babcock, Bradley Murray, Robert L. Frey, and Wallace H. Campbell.

"Though some of these government ventures have not been too profitable, one must realize these were crash programs and necessary to get things started.

"Until recently, it was difficult to establish private industry because the interest rate was 20 per cent. A new policy was established by the Iranian government which set up 90 million dollars for loan to industries at a very low interest, 5 years' free taxes and no duties on machinery and equipment. Foreign industry was encouraged, given state protection, and retirement of capital is unrestricted.

"Judging from 140 interviews we held with Iranian business men, we found they do have confidence in Americans. They respected our business know-how and would welcome joint venture capital or be willing to invest in American corporations operating in Iran.

"Proof that our corporations do attract and can create an increased flow of Iran's domestic savings and capital is found in such companies as Coca-Cola, Canada Dry, Pepsi-Cola, and Kaiser Jeep assembly plant. The newest American corporation, Goodrich Tire & Rubber Company will complete, in Tehran, a ten-and-a-half-million dollar facility in 1961."

A legislative proposal of interest to expansion planners is the plan being put forward by the ICA's office of private enterprise to underwrite investment costs incurred by U. S. firms in exploring investment prospects in underdeveloped areas.

The underwriting would be accomplished by offering a U. S. Government insurance contract, for a fee, to qualified U. S. operating companies who indicate a bona fide interest in making an investment of their own capital in the ventures which they investigate.

The coverage provided would be in the form of an **option** to sell the results of the investigation, presented in a professionally acceptable technical report, to the U. S. Government, for a price not to exceed predetermined cost limitations, and in no case to exceed actual expenditures incurred.

This option could be exercised by the beneficiary company in the event that its own analysis of the exploratory report, or changes in relevant investment conditions affecting the venture, indicated that it would be unwise or infeasible for it to proceed with the venture, as previously planned.

If the report were purchased under this arrangement, it would become the property of the U. S. Government, and could be then used in whatever way might be conducive to interesting other sources of capital in the venture. It would, in this case, be made generally available to all potentially interested parties through the facilities of the U. S. Department of Commerce and by other means.

* * *

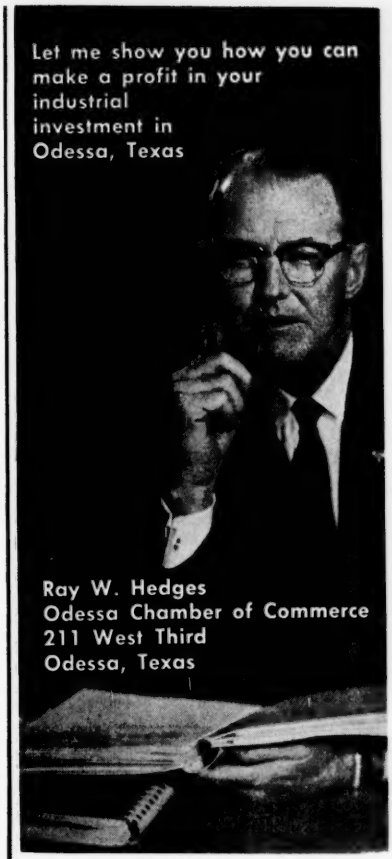
A new CED report on depressed areas programs calls for the establishment of Federal Reserve Development Corporations in each of the twelve Federal Reserve Districts to supplement state and private financing of new business ventures. CED also recommends that the Federal government, in the location of permanent new government facilities, give special consideration to distressed areas "so long as such an area can meet the requirements of economy and efficiency in location."

* * *

Al Kohn

Your wandering staff: by the time this number reaches you, your editor will have completed a swing through the Maritime Provinces and other parts of Canada to collect new material for our annual Canadian Progress Edition. International Editor Walter Hunziker is in Zurich and will travel Western Europe for a new report. One of our most pleasant sessions recently occurred right in New Orleans where we were guests of the Association of Railroad Advertising Managers. Our thanks to President Al Kohn, of Southern Pacific, San Francisco.

— H. M. C.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- **AMPLE RESOURCES**
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- **LABOR AVAILABILITY**
Lewiston has the 3 factors of importance to industries.
Labor Relations
Labor Supply and its skills

- **ADEQUATE HOUSING**
Lewiston has a good selection of homes that may be purchased, and apartments may be readily rented!

- **PROGRESSIVE PEOPLE**
Lewiston people are proud, progressive, thrifty people, who want to help new industry as well as established industry.

- **SCHOOLS**
Lewiston's school program is progressive and well-directed. Lewiston offers 8 public grammar schools, one public high school, 7 parochial grade schools, one parochial high school and Bates College!

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"The production efficiency is very good."

"We have been quite successful in getting technical people to come here."

For more information concerning Lewiston, contact

INDUSTRIAL DEVELOPMENT DEPT.
Lewiston, Maine
Samuel Michael, Director

INDUSTRIAL DEVELOPMENT LETTERS MANUFACTURERS RECORD

SIRS: We have just received the 1961 BLUE BOOK Edition of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD and would like to commend you very highly for the information contained therein. It is evident that a lot of planning and preparation went into this issue.

We would like to obtain four additional copies of this BLUE BOOK Edition. . .

E. A. EARP
Assistant Vice President
Package Products Company, Inc.
Charlotte, North Carolina

SIRS: The Seaboard missed the boat in getting coverage on our Charlotte Industrial Park along with the others published recently in your fine magazine INDUSTRIAL DEVELOPMENT and apparently it was entirely our fault.

. . . I am sure it is too late to do anything about it now but certainly we should like to have our West Charlotte development included the next time you publish the evcellent list of Industrial Parks.

May I take this opportunity to congratulate you and your staff on your informative and interesting publication.

ROBERT S. LOCKHART, JR.
Asst. Freight Traffic Mgr.
Seaboard Air Line Railroad Co.
Charlotte, North Carolina

► **We have sent Mr. Lockhart the necessary questionnaire so that this park will be listed in our next annual Industrial Park report.**

SIRS: Upon reading in your April "Check Points" that you are giving free copies of INDUSTRIAL DEVELOPMENT magazine to some Federal foreign aid agency for placement in overseas libraries, because the agency said "we have no funds," I started to grab the phone and asks if you have been sampling some Georgia yodeling syrup.

However, the thought immediately occurred that through your generosity you are providing foreign countries with valuable information about the American free enterprise system which Heaven knows they would not otherwise get.

On the other hand, if ever again you receive such an asinine request from idiots in Washington, feel free to tell them you know at least one Tennessean who, since he can't do anything about the way his tax money is being thrown away all over the world, is willing to dig into his personal pocketbook to provide a subscription to INDUSTRIAL DEVELOPMENT and any other good Americanist publications any time the bureaucrats can't find the necessary amount in their multi-million dollar budgets.

Those poor, pitiful, underpaid, underfed, underhanded world saviors! Or, as the Nashville Banner put it: Pinks, punks, and pukes.

DAVID D. DICKEY
Nashville, Tenn.

SIRS: Congratulations on your fine publication and the great force it is in industrial development.

ROBERT M. EASTMENT, Chairman
Industrial Engineering
University of Missouri
Columbia, Missouri

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Since before the turn of the century MANUFACTURERS RECORD has issued special studies of specific cities and areas to assist the site-seeking industrial firm. Today, through the combined coverage of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD this tradition of leadership in this field is being extended and carried forward. Before you go site-seeking, take advantage of background studies which have already been prepared for the areas listed below. Generally, reprints are available gratis.

Livonia, Michigan	June, 1961
Arizona	June, 1961
Blue Book of South	May, 1961
Empire Central, Dallas	May, 1961
Edmonton, Canada	May, 1961
New Mexico	Apr., 1961
Keokuk-Ft. Madison, Iowa	Apr., 1961
Northern Natural Gas	Mar., 1961
Odessa, Texas	Mar., 1961
The Gulf-Caribbean Area	Feb., 1961
Area of the Palm Beaches	Feb., 1961
Greater Burlington, Vt.	Feb., 1961
Central New York	Jan., 1961
Missouri	Jan., 1961
Pennsylvania	Dec., 1960
Oak Ridge, Tenn.	Dec., 1960
Berkshire County, Mass.	Nov., 1960
North Bay Area of Calif.	Nov., 1960
The British Isles	Nov., 1960
Indiana	Oct., 1960
Georgia	Sept., 1960
Seattle, Wash.	Sept., 1960
Elliott Lake, Canada	Sept., 1960
Canada, 1960	Aug., 1960
Rock Island Lines	Aug., 1960
New York's Capital District	Aug., 1960
New England	July, 1960
Washington State	July, 1960
North Carolina	June, 1960
California, South Bay Area	June, 1960
Blue Book of South	May, 1960
The Mohawk Valley	May, 1960
No. and Cen. California	May, 1960
Alma, Michigan	Apr., 1960
Thomasville, Ga.	Apr., 1960
St. Augustine, Fla.	Mar., 1960
Colorado	Mar., 1960
Gainesville, Fla.	Feb., 1960
Western Pacific Railroad	Feb., 1960
West Virginia	Jan., 1960
Calgary, Canada	Jan., 1960
Hawaii	Dec., 1959
Kansas	Dec., 1959
St. Lawrence Valley	Nov., 1959
Oregon	Nov., 1959
Virginia	Oct., 1959
Staten Island, New York City	Oct., 1959
Oklahoma	Sept., 1959
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LETTERS

SIRS: We have misplaced our copy of your recent edition of INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD which listed the power companies in the United States which have industrial development department departments. One of our local bankers is very interested in securing a copy of this publication and I have a need for another copy . . .

JAMES O. PICONE
San Antonio, Texas

SIRS: The Department gets a subscription to your publication and so I have reviewed it monthly for several years. It certainly makes a unique contribution to the company who is contemplating a move or expansion into another community or state. . .

C. A. ANDERSON, Head
Dept. of Industrial Engineering
North Carolina State College
Raleigh, North Carolina

SIRS: From time to time, as you know, Management Review and AMA's monthly magazine for front-line supervisors, Supervisory Management, publish in digest form articles from INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD as part of "the month's best in business reading." These, of course, are published with full credit to the original source.

In the past, we have been writing to you each time we sought permission to digest an article from your magazine. At our request, however, most of our sources have kindly granted us standing permission to condense their material . . .

Recently, we've been drawing on INDUSTRIAL DEVELOPMENT and MANUFACTRERS RECORD's fine articles to an increasing degree, and we would greatly appreciate your granting us similar standing permission. Would you be good enough to write us a short note, confirming that we have blanket permission to continue to digest articles from INDUSTRIAL DEVELOPMENT and MANUFACTURERS RECORD as we have in the past? . . .

PETER HAAS, Digest Editor
American Management Association
1515 Broadway
New York, New York

SIRS: On page 2 of the May issue of INDUSTRIAL DEVELOPMENT you mentioned that reprints may be available of background studies covering several areas. We would therefore, appreciate it greatly if you would furnish us with the following, if available: Oak Ridge, Tenn.; Indiana, Georgia, North Carolina, Thomasville, Ga., West Virginia, Virginia . . .

NAME WITHHELD

SIRS: As a librarian, I see and handle many publications, and for a long time I have felt that IDMR does not get due recognition for being the superb publication that it is. . .

I have watched IDMR grow since I first met this publication when I was a librarian in the Florida State University Library in Tallahassee. It is really "tops" in its field. I do not know another that does anything like the job IDMR does.

I am quite sure your "local readers" (see page 2, paragraph 1, April, 1961) have no idea of the international coverage of INDUSTRIAL DEVELOPMENT/MANUFACTURERS RECORD.

Best of luck for your continued success.

MRS. VIRGINIA J. EDGINGTON
Librarian
Georgia Power Company
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Peter R. D'Errico, Director
Department of Industrial Development
Bangor, Maine

THE INDUSTRIAL DEVELOPMENT RESEARCH COUNCIL TAKES SHAPE

PROVISIONAL BOARD OF DIRECTORS

The following executives, representing a variety of interests in different aspects of expansion planning, have been chosen to serve as a governing body during the formation of the IDRC. At the first annual conference, in October, board members will be elected to serve on a continuing basis. Those who are interested in stimulating scientific approaches to development activities are indebted to these men for their expression of interest and confidence in IDRC.

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Does your company seek to plan its growth in an orderly and logical pattern? Are you concerned with continuing studies of new facilities and locations? Is it your desire to inform your staff of the most advanced thinking in the new art or science of growth technology? If these ideas impinge upon your sphere of interests, you will want to know about the newly-formed Industrial Development Research Council.

Plans are rapidly firming up for the first annual conference of the Industrial Development Research Council. The new organization, designed to provide a forum for those executives in industry who are concerned with the planning of industrial growth, has become a reality.

Plans call for a two-day session in New York in late October. The tentative program includes discussions of growth theory, company organization for expansion planning, scientific approaches to project evaluation and site selection, feasibility studies to estimate economic potential, methods for analyzing regions, states and communities, and the weighing of factors involved in final decisions.

Detailed plans are now being discussed among the IDRC's provisional board of directors — an outstanding group of executives offering program guidance in the early stages of the Council's establishment. Final program plans will be announced in late summer.

Meanwhile, industry executives who have not yet learned of the IDRC's establishment may be interested in a quick rundown on the progress of the group:

The need for the Council has been recognized for several years by the more professional practitioners of industrial growth planning. Early in 1961 INDUSTRIAL DEVELOPMENT magazine endorsed the Council proposal and offered to provide staff assistance during the formative stages. A panel of highly-qualified executives agreed to serve as provisional directors to steer the organization through the first session.

Simultaneously, proposed Constitution and By Laws documents were drafted and adopted. Attorneys prepared the organization's charter and IDRC became a legal entity.

As stated in the Constitution, the objectives of the non-profit, non-political Council include: (a) to encourage the advancement of scientific methods, techniques, and procedures in the field of industrial planning, expansion, and development; (b) to foster a more intensive use of basic and applied research; (c) to stimulate a free exchange of ideas and data; (d) to promote a fuller utilization of proven scientific principles and techniques; (e) to cooperate with other organizations and associations which are partially involved in allied endeavors; (f) to elevate the professional standards of those active; (g) to advocate and promote the evolution of an educational base for this profession; (h) to serve as a clearing house for information; (i) to publicize the activities and reports of the Council and its members; and (j) to cultivate cooperative relations among its members.

The Constitution provides that active membership be limited to executives in industry whose primary duties involve the planning of future expansion. Attendance at the first conference will be limited to active members.

While it would obviously be premature to attempt at this stage to say precisely what type of programs IDRC will conduct and what manner of activities will be involved, the first discussions with interested individuals provides several common denominators.

First, those who are concerned with facility planning and site selection are very much interested in putting these activities on a more professional footing.

Second, there is a recognized need for a quiet, constructive, atmosphere in which professional growth planners can exchange ideas and theories without subjecting themselves to excessive sales pressure and harassment by area promotion organizations.

Third, there is a growing incentive for enlightened industrial spokesmen to formulate certain basic principles, such as methods of data presentation, to guide the thousands of aggressive area groups seeking to cooperate with them.

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General Manager

BRUNSWICK AREA CHAMBER OF COMMERCE
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PArkview 5-5411

Further, the consensus seems to be that the IDRC will best fulfill its mission by acting as a small, professional body with limited membership. There is no desire to develop a large budget with substantial paid staff and extensive activities. In fact, more prospective members have been disapproved than have been approved during the early months of organization effort. As of June 1, only 408 eligible prospective members had been identified. Annual dues of $25 will go largely to cover meeting costs.

Opportunities to Serve

Discussing opportunities for IDRC to serve, Robert E. Johnson, Economist and Actuary, Western Electric Company, had this to say in a recent statement:

"In this day of the rapid proliferation of business and professional organizations, one might quite logically ask 'Why the Industrial Development Research Council?' The answer is not difficult to come by.

"The nation is concerned about depressed areas, the rehabilitation of deteriorating core portions of central cities, the suburban sprawl, the furnishing of jobs for a net increase in the labor force of 13,000,000 individuals in this decade, 'growthmanship,' i.e. an optimal use of resources to achieve an ever-rising standard of living in an increasingly competitive world. The above is a difficult array of challenges. A reasonably satisfactory solution of these problems will require the coordinated use of a broad spectrum of the knowledge from many sciences and arts.

"Such professionals as the demographer, the economist and the sociologist have analyzed these situations looking for the fundamental causes. Other problems will require the aid of bankers, marketers and other specialists for their solution.

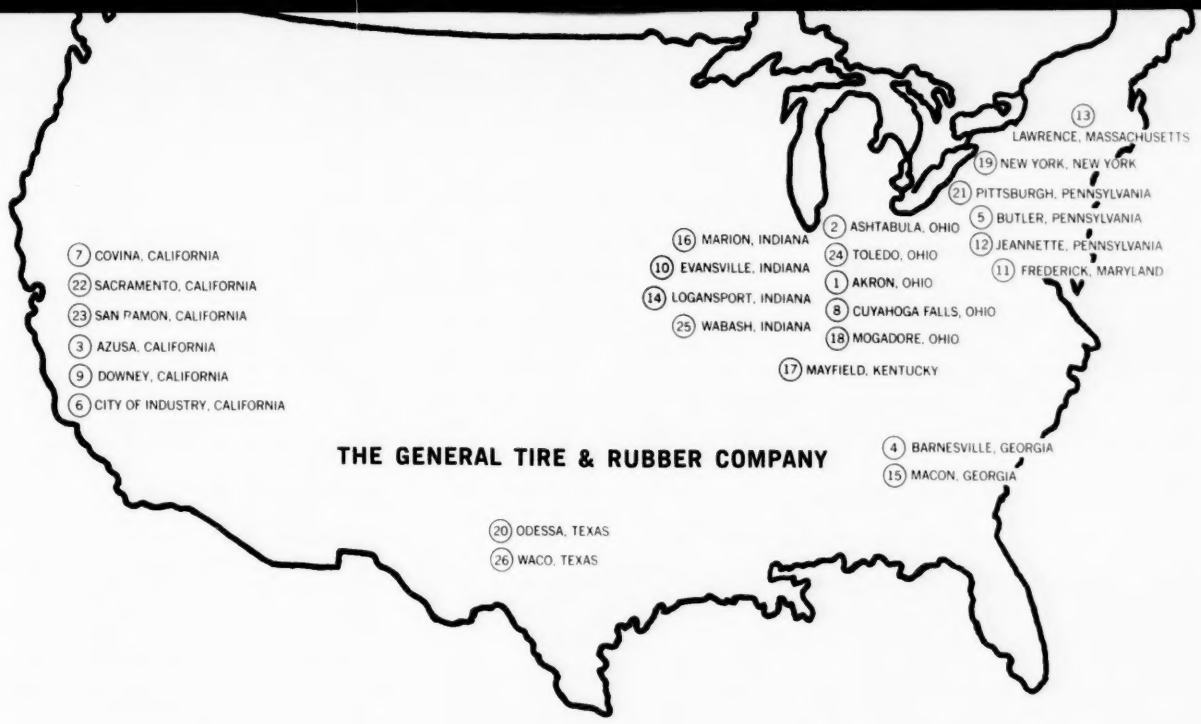
"Then there are 'the new arts' which have much to contribute to the Industrial Developer in aiding him to reach more rapid and better solutions. Among these 'new arts' we may mention the ever-broadening scope of statistics and the more sophisticated use or manipulation of these data. A whole new area of complicated mathematical analysis has grown up under the general heading of Operations Research. A post-war professional organization under the title of The Institute of Management Sciences concerns itself with the application of a broad range of science to the solution of many problems. Space prevents the discussions of many other groups concerned with special aspects of many problems.

"Just as many of the current problems of Industrial Development did not just happen, but were the result of basic root causes, their correction will not just happen. Industrial Developers are committed to advancing their own areas. They are busy men. They do not have the time to read all the literature in all the fields that impinge on their problems. Likewise many, if not most, of the contacts they make in striving to develop their areas do not have the time to keep abreast of all activities of significance. Even if they could, a great deal of the material would be related to other subject fields.

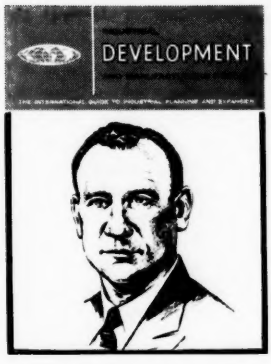
"Thus, one of the prime purposes of the Industrial Development Research Council is to bring into focus on Industrial Development problems the salient knowledge of many sciences and disciplines. This will mean on many occasions refining pertinent material from large masses of information. On other occasions it may mean modifying and adapting techniques from a subject field to the Industrial Development field. Further, there may be some stimulation of academic researchers to apply their talents to the particular problems of Industrial Development. The final culmination of this aspect of the purposes of the Industrial Development Research Council may be to add more science and professional status to the art of the Industrial Developer. The art will not diminish, but as the science grows the whole job of the Industrial Developer will increase in service to the nation."

For More Information

Executives who are interested in scientific approaches to growth planning and who desire more information about IDRC membership and program plans are invited to write: Industrial Development Research Council, 2592 Apple Valley Road, Atlanta 19, Georgia.



A COORDINATED PROGRAM FOR FACILITY PLANNING



By M. G. O'Neil, President
The General Tire & Rubber Company

COVER STORY

Greyhounds can catch the electric rabbit only if it stops. The chroniclers of General Tire and Rubber's history will catch up only if the company's expansion stops — and that is not likely.

The General Tire & Rubber Company was incorporated on September 29, 1915, with $200,000 capitalization. The first building was completed later that year. Sales for 1916 were $219,197.

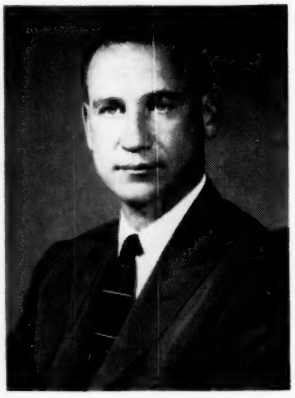
In 1918, as sales soared to $2,363,872, the original Akron office building was completed. And in 1924 sales hit $12,145,135, which necessitated greatly extending the main manufacturing area, building of a powerhouse and the expansion of the office building.

Now in its 45th year, General has seven different plant sites in the Akron area alone. Its sales in 1960, incidentally, were over three-quarters of a billion dollars. It now has 26 domestic plants and 19 subsidiary plants in 17 foreign nations. It has nine Kraft retreading shops and

20 division warehouses. Its Research and Development Center will be occupied this year, and other facilities include an 8½-mile testing tract in Uvalde, Texas and a testing center and track under construction near Akron.

General's industrial empire includes facilities for manufacturing tires, industrial products, retread rubber, synthetic rubber, tire fabric plastic products, metal products and wrought iron and steel products.

It has facilities for the production of resin and chemical specialties. It has a plant for automation and ordnance engineering, facilities for research, development and production of major rocket propulsion and space age projects in five California cities, and it has headquarters for five TV and seven radio stations in New York City.



General Tire's President is Michael Gerald O'Neil, who has been with the company since coming out of the Air Force in 1946. He is also a Director of General Tire's leading subsidiary, Aerojet General. Currently active in the United States Council of the International Chamber of Commerce and in the American Safety Foundation, he is also a leader in civic affairs and is a Director of the United Community Funds and Councils of America.

The General Tire & Rubber Company has been described as the fastest-growing business in the rubber industry and one of the most diversified companies in the world.

General's growth and its diversification has forced it to make a science of its plant-site selection program.

The need for new plant facilities are usually pointed out by (1) growth of existing products. (2) new products resulting from research and development, (3) obsolescence of existing facilities, and (4) change in location of our markets.

Items 1, 3 and 4 can be forecast at least a year or two permitting the proper studies to be made. In the case of new products, however, it may require a crash program to get there "fustest with the mostest." Other crash programs can result in defense programs such as our missile work or in a major change required by the automotive industries.

When a possible need for new facilities has been pointed out, the Market Research group is asked for a projected sales forecast and a theoretical location of the plant based on potential markets. If this report is favorable, Central Engineering is assigned the task of locating possible plant sites.

With the theoretical point indicated by Market Research as the center, a circle with a radius of approximately 100 miles is drawn on a map. The towns and cities falling into or close to this area are then examined as to their population, type of industry and availability of utilities and transportation. By this means the number of likely towns can be reduced to possibly eight or ten.

We next contact the State Development Board, and, in some cases, the development boards of the railroads and utilities, giving them our requirements and discussing with them the eight or ten towns we have selected for further study. We have found these sources very helpful in supplying up-to-date information on the selected areas, so that eight to ten towns can be further reduced to maybe five or six.

Arrangements are now made to visit these areas with the state representative and he in turn arranges for meetings with the local development boards or the Chamber of Commerce. Our identity is not revealed to anyone except the state representative until we have completed our inspections and have the possible plant sites under option.

A member of Central Engineering and the state representative visit possible plant sites and meet with members of the Chamber of Commerce, city and county officials, and the utilities representatives, outlining briefly the amount of land required, size of facility planned, the type of manufacturing planned, number of people to be employed the first year, estimated employment in five and ten years, the ratio of male to female employees, estimated KW hours per month, fuel consumption, and water requirements.

If the sites visited are acceptable and the discussions are satisfactory, the head of the local committee is given a 7-page survey questionnaire which he is asked to fill out and forward to the State Board for transmittal to Central Engineering. This questionnaire asks for details on population, schools, transportation, employers, salary and water levels, weather statistics, utility rates, water supplies and taxes. By this means, one man can gather all the preliminary information needed in a week or two.

When all the information on the five or six areas has been received from the state, it is usually possible to reduce the number of areas to be studied to three or four. This information is then given to the Tax Department, Labor Relations, Market Research, Central Engineering, and Manufacturing Analysis for detailed study and comments.

From this work, it is possible to decide on a first and second choice. The Legal Department and Engineering Department now cooperate in securing options on two sites. This is handled through a third party to maintain secrecy until the options are firm.

Soil borings are made, and, in some cases, test wells drilled. Firm commitments are obtained on all utilities, transportation facilities, and any other factor that may have

considerable influence on the plant's intended operations.

Further visits to the selected plant sites, during the option period, may be made by any of the groups participating in this study if additional information is needed.

If no unfavorable factors are uncovered during this option period, the land is purchased with the engineering and construction following according to the timetable established by the Market Research forecast.

Major factors to be considered when locating a new plant or expanding an existing plant can vary a great deal.

Ours is a well-diversified company and the factors that placed plants in certain areas are quite interesting. In the case of two of our chemical plants, the prime consideration was the ability to receive the raw materials by pipelines.

Tire manufacturing plants, on the other hand, give the most consideration to the location of markets and the cost of distribution. Close behind is the cost of utilities as these are rather substantial. Mechanical goods and plastic operations require reasonable labor costs, a good water supply and average power rates. Some operations may require a preponderance of female employees, whereas others will employ more males. Taxes too can be a very important consideration, depending on the product manufactured and whether or not large inventories of raw materials and finished goods are required.

Comparison of communities in the selection of a plant site is not easy as we believe you must actually live in an area to get the feel of it. This is what we do; the project engineer and division manager will move into the local hotel unbeknown to anyone and talk to the people in the stores, barbershop, restaurants, court house, etc.; and attend the local functions. A few days spent in this manner will tell you a great deal about the community.

Our method of locating sites is simple and logical and, for us, has worked out quite well. It can be done quietly so that we can back away from an area without any hard feelings if we wish. It is not costly as there are few people involved and travelling is kept to a minimum.

The overall time from the start until the land is purchased is from two to six months.

It is also our policy to purchase ample land, not because we are land speculators, but because past experience has shown that it is difficult to forecast what conditions might be in just a few years, let alone 25 or more.

We have a plant that once was on the end of a streetcar line. Th[is] was good planning at the time as it provided transportation for the work force. Today the streetcars are gone and the parking problem is acute. Many of our employees must park many blocks from the plant because there is no additional land for parking cars that are now in the ratio of 1.2 employees per car.

Every time a plant-site selection program is completed, a new chapter is added to the fantastic history of The General Tire & Rubber Company.

ROBT. A. BRADY
SUPERVISOR OF THE
TOWN OF SMITHTOWN

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GYRODYNE CORPORATION: Nationally-known for helicopters — now has more than 15 million in Navy contracts. Located in the beautiful wooded section of St. James.

LILY TULIP CUP COMPANY: Research and Development Laboratory built in Smithtown after studying scores of other industrial sites.

MACKAY RADIO AND TELEGRAPH CORPORATION: Occupies more than 1100 acres on the south side of town and is part of the American Cable and Radio Corp. and ITT.

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RECREATION: Your entire family will appreciate Smithtown's superb recreation facilities, boating, shopping centers, schools, churches, civic and cultural activities.

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In evaluating cities as possible plant locations, many executives have been influenced by the "economic base" theory of growth. This second report in ID's new technical series contests the assumption that exports of goods and services alone make a city grow. The author suggests that the volume of services consumed internally might be more significant in appraising the attractiveness of a proposed location.

LOCATION THEORY: PART II

THE ECONOMIC BASE

By Dr. Ralph W. Pfouts, Professor of Economics
University of North Carolina

Dr. Pfouts is a Kansan who went as far as his master's degree in economics at the University of Kansas and then took his doctorate at the University of North Carolina, where he is now Professor of Economics and Chairman of Graduate Studies. Last year, Chandler-Davis of Trenton, New Jersey, published his book entitled "The Techniques of Urban Economic Analysis."

A theory of urban growth that developed between the two World Wars and that was widely accepted has been challenged strenuously in recent years by economists. This theory, which is called the economic base theory, divides a city's economic activity into two categories, basic and service. Basic activity is exporting activities, that is, selling beyond the confines of the city and all other activity is service activity. It is the basic or exporting activity that is believed to be the city-building activity; it is the source of urban economic growth. Service activity is not nearly so central to the growth of the city.[1]

The economic base theory has been widely embraced by urban geographers, city planners, Chamber of Commerce officials, municipal administrators and other professional groups that are concerned with urban development. Indeed it is not impossible that industrial executives who are responsible for plant location may have been influenced by the economic base theory. This is not at all surprising because such groups need a rationale of urban development and the base theory is a plausible rationale. The administrator of municipal functions, especially, requires some knowledge or theory of how cities grow because he must formulate or execute policies that will be effective in a future period, in other words during a time when the city has changed from its present condition. Thus he needs some well-defined ideas on how urban areas develop and change. Administrators have fairly generally accepted the economic base theory. Evidence of this may be found in the great emphasis that communities have put on getting industry that "will bring money in from the outside" into their communities.

In the past several years objections to the economic base theory have been raised by economists and, to a lesser extent, by city planners.[2] The substance of these objections center on the exaggerated impor-

1. For a discussion of the economic base theory see Homer Hoyt, "Economic Background of Cities," *Journal of Land and Public Utility Economies*, May, 1941, pp. 188-95. Hoyt is an important pioneer in the economic base theory and the developer of many of its leading techniques of analysis. The most extensive statement of the theory is a series of scholarly articles by Richard B. Andrews that appeared in *Land Economics* in 1953 and 1954. Several of these are reprinted in *Techniques of Urban Economic Analysis*, R. W. Pfouts, ed., Chandler-Davis Co., West Trenton, New Jersey, 1959, pp. 5-17, 40-183.

tance of exports in the base theory and on the passive role allotted to economic activity within the city by the base theory. The dissident economists do not say that exporting or "basic" activity is unimportant, but rather they argue that such activity is not the only source of economic development. The point could be summarized by saying that most economists who have studied the subject believed that the economic base theory is too one-sided.

In fact the shortcoming of the economic base theory is almost obvious. Suppose that a basic or exporting firm sells $100 worth of goods (these goods are necessarily sold outside the city since this is a basic firm), thus $100 has been added to the income of the city. Hence according to the economic base theory this is city building income; an addition to the income of the city has been gained that could not have been obtained within the city. But why should we stop at the city limits with our tracing of the effect of the new income? This money will circulate to some extent within the city and each time that a part of it is spent it becomes income to whomever receives it.

For example suppose that the recipient of the $100 decides to spend $20 outside the city and to save $24 while spending the remaining $56 inside the city. Someone else now has received $56 as a result of spending within the city, that is as a result of "service" activity within the city. For simplicity suppose that one person received the $56 and he spends $12 outside the city, saves $14 and spends $30 inside the city. The total income that has been generated in the series of transactions is $186 of which $86 developed in "service" transactions within the city. And the $30 spent inside the city will continue to circulate with amounts being withdrawn by individuals saving and spending outside the community.

This magnification of income through circulation of money is called the multiplier by economists. The argument demonstrated above by example can be developed more rigorously. Suppose that we use E to indicate exports and I to indicate imports, then the balance of trade is given by

(1) $B = E - I$

We assume that the quantity of goods imported into the community depends on income in the community. To consider a specific relationship between income and imports we use a linear equation

(2) $I = e + fY$,

where Y is income and e and f are constants. The effect of a change in income on imports is given by

(3) $\frac{dI}{dY} = f.$

It is obvious from (1) that imports can affect the balance of trade and in a logical sense are just as important as exports of basic activity.

We make the further assumption that consumption expenditures within the community depend on income; as income within the community increases, consumption expenditures also increase. Again we assume that the relation can be adequately described by a linear equation similar to (2)

(4) $C = a + bY$

Here a and b are positive constants and C stands for consumption expenditure. And similar to (3), the change in consumption occasioned by a change in income is

(5) $\frac{dC}{dY} = b.$

Since the entire income of the community will not be spent outside the community and since the entire income will not be spent for consumption goods (some will be saved), f and b are each greater than zero but less than one, so we have

$0 < f, b < 1.$

Now we consider a quantum of money represented by B in (1) that enters the community. A part of this is spent outside and this part is indicated by f in (2). Then the proportion of B spent inside the community is $1 - f$. In turn, the part of the income $1 - f$ within the community that is spent within the community is given by b in (4). In other words

2. Some of the early objections to the economic base theory include Charles M. Tiebout, "The Urban Economic Base Reconsidered," *Land Economics*, Feb. 1956, pp. 95-9. James Gilles and William Grigsby, "Classification Errors in Base-Ratio Analysis," *Journal of the American Institute of Planners*, vol. 22, Winter, 1956, pp. 17-23. Hans Blumenfeld, "The Economic Base of the Metropolis," *Journal of the American Institute of Planners*, vol. 21, Fall, 1955, pp. 114-32. Ralph W. Pfouts, "An Empirical Testing of the Economic Base Theory," *Journal of the American Institute of Planners*, vol. 23, 1957, pp. 64-69. Ralph W. Pfouts and Erle T. Curtis, "Limitations on the Economic Base Analysis" *Social Forces*, vol. 36, 1958, pp. 303-10. All of these are reprinted in *Techniques of Urban Economic Analysis* which is cited above.

DOVER-FOXCROFT

A TOWN GEARED TO COOPERATE WITH YOU IN INSURING THE SUCCESS OF YOUR PLANT LOCATION BECAUSE IT IS:

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5 — Able to offer adequate housing to employees.

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FOR FURTHER DETAILS CONTACT . . .

Bernard B. Moir
Co-Chairman
Industrial Dev. Comsn.
Dover-Foxcroft, Maine

Phone: LOgan 4-2211

when B is received it becomes income to the community. The recipient leaves part of B for saving or for spending inside the community so we must multiply by (1—f). To take the effect of savings into account we must also multiply by b. Therefore in this round the money left in the community income stream is B(1—f)b. The same influences must be considered in the next round. This round begins with $B(1-f)b$ as the remaining money after both influences are taken into account, and we have $B[(1-f)b]^2$ left after the spending takes place. For each round of spending we must multiply by (1—f)b. The total change in income is

(6) $dY=B+B(1-f)b+B[(1-f)b]^2 +B[(1-f)b]^3+...+B[(1-f)b]^n.$

Equation (6) is a geometric progression and by well established formula the sum is

(7) $dY=B\frac{1}{1-(1-f)b}=\frac{B}{1-b+bf}=kB.$

The expression $\frac{1}{1-b+bf}$ in (7) is a community income multiplier.[3]

3. Cf. R. W. Pfouts, "An Empirical Testing of the Economic Base Theory" cited in footnote 2, pp. 302-4.

To illustrate the importance of the flow of money within the community suppose that $b=.7$ and $f=.3$. Then $k=1.96$. In other words for an injection of $100 a total income of $196 is possible. The reader can easily verify by trying examples that as b increases toward one the multiplier increases and as f increases toward one the multiplier falls.

It is clear from the preceding argument that while exports are important in determining the income of a community, they are by no means the only factors to be considered. Imports are equally important as is the tendency of the community to save. The total income is affected by these just as it is by exports of basic activity.

Thus the theory of urban income generation can be formulated with considerable precision. But we might very well raise a further question as to what this means to the industrial location executive.

First what does it mean in real terms to say that a good deal of income is spent inside the community rather than going outside or being saved? It means the community has facilities for people to spend money. It has attractive stores and amusements and the prices are low enough to keep inhabitants from spending in other communities. A city with sizable "service" industries is likely to be a pleasant city in which to live. It is a "viable" city at least so far as consumption is concerned. It is likely to be a pleasantly prosperous place. Consequently estimates of the amount of "service" trading within the community is likely to be an indicator of whether a town is a pleasant community from the viewpoint of the consumer, and the laborer is a consumer.

A second point refers to the view held by the power group within the city. If they hold strictly to the economic base theory approach they are in effect telling the industrial location executive, "Come in here and make us grow—do the job for us." If they embrace the base theory they are not using whatever means are available to them to improve the flow of money within the community. They should take steps to make the community attractive to the consumer; they cannot properly load the entire burden of community growth on the exporting industry.

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For full information, write or phone William J. St. Onge, Executive Manager, Sanford-Springvale Chamber of Commerce, 261 Main Street, Sanford, Maine. Telephone: 1248.

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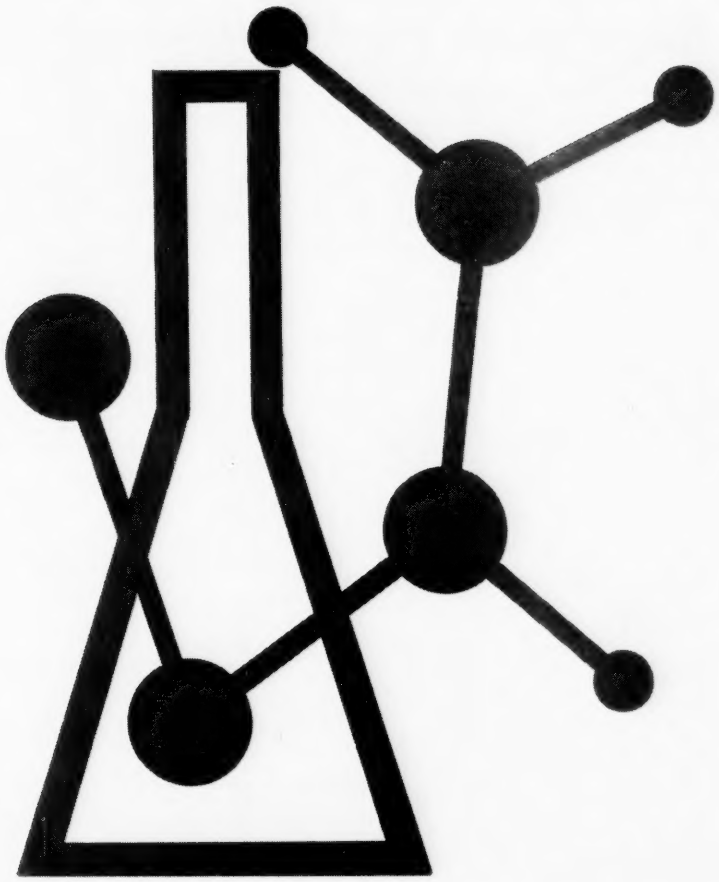

NEW ENGLAND–STRONG ON KNOW-HOW

If research facilities, educational institutions and scholarly atmosphere are important to your company, New England warrants serious consideration in your expansion plans. A recent national survey identified no less than 577 industrial laboratories in the region. Here's a report that includes an index of significant units.

Ever since the founding of Boston Latin School in 1635 and John Harvard's bequest of his library to the Massachusetts Bay Colony's college, education and research have been major preoccupations of New England. Having evolved into a sort of regional Athens of America, the section has become a favorite location for industries relying heavily on science and advance technology. After examining over-all industrial location factors in last July's issue, ID turns this year to a look at the New England laboratories.

Many of today's most important industries are independent of single sources of massive raw materials and all can now move their key personnel around the country within a few hours. More and more plants are now being located in areas that offer facilities for intensive research and that have an atmosphere that is congenial to scientists and professional people. A prime example is the cluster of research and development firms in the Boston metropolitan area, but all of New England has shared in the growth.

The types of industries represented are a cross-section of American technology, and are not confined to those industries which have a major concentration of basic manufacturing facilities in New England. Thus chemical laboratories are the largest single group, despite the fact that New England does not have many large basic chemical plants.

The laboratories and research organizations listed on subsequent pages fall into three main categories — those of industrial firms or private research organizations, college and university facilities and Federal military installations. In addition, there are a number of medical and biological laboratories, other than those associated with industrial concerns, which are not listed.

The numbers in parentheses following most of the entries in the industrial laboratories listing will be recognized as the Standard Industrial Classification (S.I.C.) two-digit code. Some laboratories are engaged in pure research which is not readily classifiable as to type of industry and others are engaged in many different fields, with no one of them predominating over the others; these have not been assigned any code. For those not familiar with the S.I.C. code, here is an explanation:

19 Ordance and accessories
20 Food and kindred products
21 Tobacco manufactures
22 Textile mill products
23 Apparel and finished products made of fabrics, etc.
24 Lumber and wood products, except furniture
25 Furniture and fixtures
26 Paper and allied products
27 Printing, publishing and allied industries
28 Chemicals and allied products
29 Petroleum refining and related industries
30 Rubber and miscellaneous plastics products
31 Leather and leather products
32 Stone, clay and glass products
33 Primary metal industries
34 Fabricated metal products, except ordance, machinery and transportation equipment
35 Machinery, except electrical
36 Electrical machinery, equipment and supplies
37 Transportation equipment
38 Professional, scientific and controlling instruments; photographic and optical goods; watches and clocks
39 Miscellaneous manufacturing industries

An analysis of the listing shows that chemicals lead with 100 laboratories, followed by electrical equipment with 94, instruments with 73, non-electric machinery with 72, primary metals with 37, food with 24, textiles with 23, paper with 20, stone-clay-glass with 19, fabricated metals with 14, rubber with 13, and transportation equipment with 10.

The chemical, electrical and instruments fields are of course those with especially large scientific requirements, whereas plants in some standard consumers-goods industries such as apparel, leather goods and furniture ordinarily do not have laboratories of any size.

In some cases the laboratory located in New England is the only installation the company has in the area, with its major production facilities and its headquarters located in some other part of the country.

INDUSTRIAL RESEARCH LABORATORIES

ACH Fiber Service, Inc., 11-17 Melcher St., Boston 10, Mass. (24, 22)

Acme Battery Corp., 200 Henry St., Stamford, Conn. (36)

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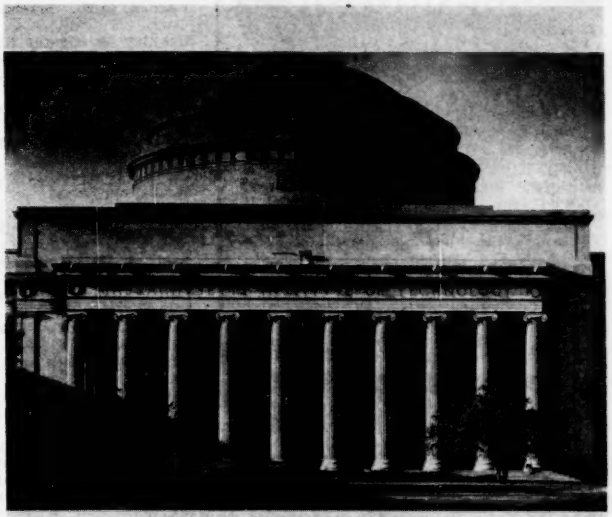

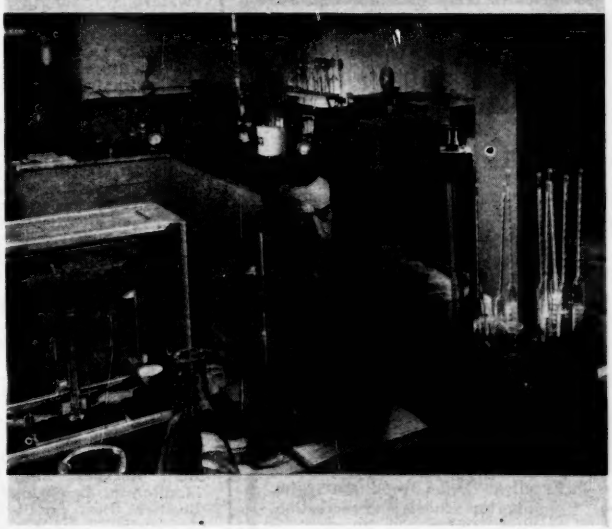

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Industrial Hygiene Associates, 295 Upland Ave., Newton 61, Mass. (35)
Infrared Industries, Inc., P. O. Box 42, Waltham, Mass. (36)
Ingraham Co., 392 North Main St., Bristol, Conn. (38)
Interchemical Corp., Wadsworth & Woodman Division, Winthrop, Maine (22)
International Paper Co., Livermore Falls, Maine (26)
International Silver Co., 500 S. Broad St., Meriden, Conn. (33)
Interstate Manufacturing Corp., 190 Boston Post Road, Orange, Conn. (38)
Itek Corp., 1605 Trapelo Rd., Waltham, Mass. (38)
Ives Laboratories, 9 Wilton St., Allston 34, Mass. (28)
Jacobs Manufacturing Co., West Hartford 10, Conn. (35)
Jamesbury Corp., 45 New St., Worcester, Mass. (35)
Jarrell-Ash Co., 26 Farwell St., Newtonville 60, Mass. (38)
Jay Laboratories, 123 North St., Andover, Mass.
Jerguson Gage & Valve Co., Adams St., Burlington, Mass. (38)
E. D. Jones Corp., Dalton, Mass. (26)
Jones & Lamson Machine Co., Springfield, Vt. (35)
K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (36)
Kaiser Aluminum & Chemical Corp., 500 Wood St., Bristol, R. I. (33)
Kahn & Co., Inc., 885 Wells Rd., Wethersfield, Conn. (38)
Kalart Co., Inc., Plainville, Conn. (36)
Kaman Aircraft Corp., Bloomfield, Conn.
Keen-Tex Testing Laboratory, 1 Main St., Woonsocket, R. I.
Robert R. Keller and Associates, Inc., 43 Union St., Manchester, N. H. (32)
Kendall Co., 140 Federal St., Boston 10, Mass. (22)
Kenmore Research Co., 630 Worcester Rd., Framingham, Mass.
Kennecott Wire & Cable Co., Bourne Ave., East Providence, R. I. (33)
Kenyon Enterprises, 345 Linwood Ave., Newtonville 60, Mass.
Kenyon Piece Dyeworks, Inc., Richmond, R. I. (22)
Frederick G. Keyes, Inc., 243 Broadway, Cambridge, Mass. (38)
Robert J. King Co., Inc., Science Rd., Norwalk, Conn. (30)
Kip Electronics Corp., P. O. Box 562, Stamford, Conn. (36)
Krohn-Hite Laboratories, Inc., 580 Massachusetts Ave., Cambridge 39, Mass. (38)
Kyanize Paints, Inc., Boston and Second Sts., Everett 49, Mass. (28)
Laboratory for Electronics, Inc., 1079 Commonwealth Ave., Boston 15, Mass. (37)
Ladd Research Industries, Inc., P. O. Box 901, Burlington, Vt.
Landers, Frary & Clark, 47 Center St., New Britain, Conn.
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Lessells and Associates, Inc., 916 Commonwealth Ave., Boston 15, Mass.
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Raymond Engineering Laboratory, Inc., Smith St., Middletown, Conn. (36)
Raytheon Co., Headquarters, Willow St., Waltham 54, Mass. (36)
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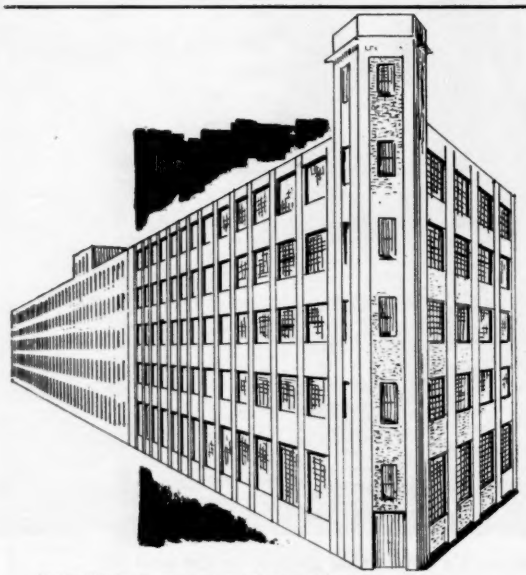

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Stamford Chemical Co., 45 Jefferson St., Stamford, Conn. (28)
Standard Brands, Inc., Fleischmann Laboratories, Betts Ave., Stamford, Conn. (20)
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State Testing Laboratory, Inc., 226 Knowlton St., Bridgeport, Conn.
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Synthron, Inc., Ashton, R. I. (28)
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Talco Engineering Co., 2685 State St., Hamden, Conn. (19)
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Ellis A. Tarlton Laboratory, 34 Pleasant St., Danbury, Conn.
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Technical Operations, Inc., Burlington, Mass.
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Vitramon, Inc., P. O. Box 544, Bridgeport 1, Conn. (36)
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Edward Washken Laboratories, 57 Bay State Rd., Cambridge, Mass. (32, 33)
Werby Laboratories, Inc., 88 Broad St., Boston 10, Mass.
Western Electric Co., Inc., Merrimack Valley Works, 1600 Osgood St., North Andover, Mass. (36)
Westfield Chemical Corp., 221 Union St., Westfield, Mass. (28)
Westfield River Paper Co., Inc., Russell, Mass. (26)
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Harvard University, (1) Division of Engineering and Applied Physics, (2) Littauer Statistical Laboratory, Cambridge 38, Mass.

Lowell Technological Institute, Research Foundation, P. O. Box 709, Lowell, Mass.

University of Maine, College of Technology, Orono, Maine.

Massachusetts Institute of Technology, School of Engineering, 77 Massachusetts Ave., Cambridge 39, Mass.

University of New Hampshire, Engineering Experiment Station, Durham, N. H.

Northeastern University, College of Engineering, 360 Huntington Ave., Boston 15, Mass.

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Rhode Island School of Design, 14 College Street, Providence, R. I.

University of Rhode Island, Division of Engineering Research and Development, Kingston, R. I.

Tufts University, College of Engineering, Robinson Hall, Medford 55, Mass.

University of Vermont Medical Center, Burlington, Vt.

Vermont Bureau of Industrial Research, Norwich University, Northfield, Vt.

Worcester Polytechnic Institute, Alden Hydraulic Laboratory, Worcester 9, Mass.

Yale University, School of Engineering, New Haven, Conn.

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Naval Underwater Sound Laboratory, New London, Conn.

Springfield Armory, Springfield 1, Mass.

The Quartermaster Research and Engineering Command, Natick, Mass.

Test Site, OM R&E Command, Maynard, Mass.

Ordance Materials Research Office, Watertown Arsenal, Watertown 72, Mass.

Watertown Arsenal, Watertown 72, Mass.

Boston Ordance District Office, Boston Army Base, Boston 10, Mass.

Office of Naval Research Branch Office, 495 Summer Street, Boston 10, Mass.

Office of Naval Research, Harvard University, Pierce Hall, Oxford St., Cambridge, Mass.

Office of Naval Research, Massachusetts Institute of Technology, Room 20E-226, Cambridge, Mass.

Naval Air Development Unit, S. Weymouth, Mass.

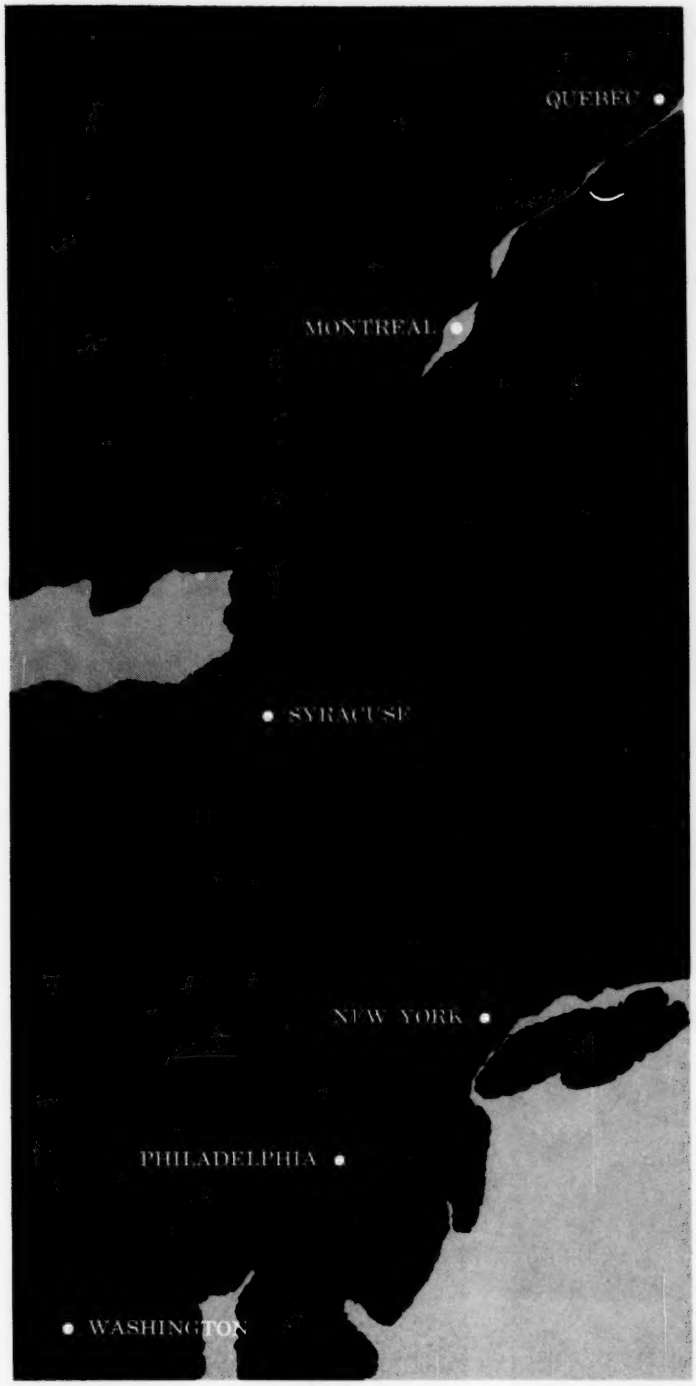
Air Force Cambridge Research Center, L. G. Hanscomb Field, Bedford, Mass.

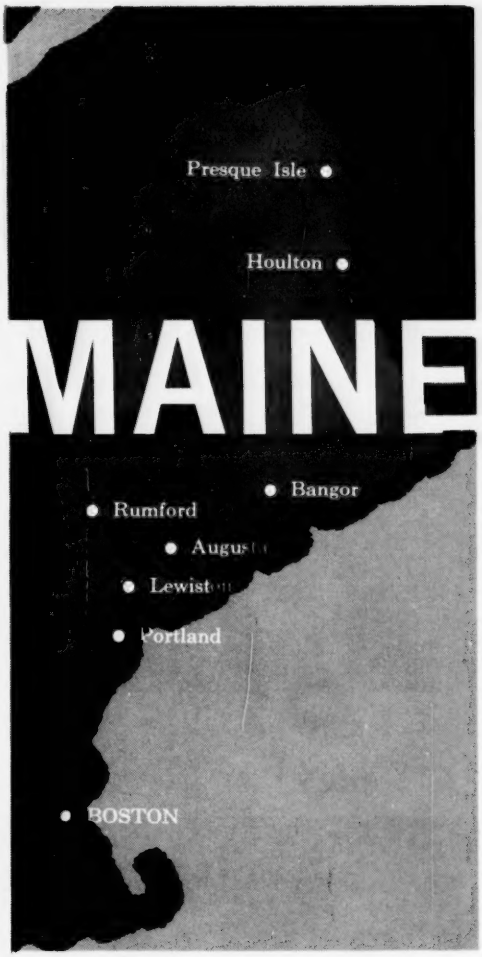
Test Site, OM R&E Command, Mt. Washington, N. H.

U. S. Naval Underwater Ordance Station, Newport, R. I.

U. S. Naval Aircraft Torpedo Unit, Quonset Point, R. I.

U. S. Naval Construction Battalion Center, Davisville, R. I.





The Pine Tree State, which shared in the original growth of manufacturing in New England, is destined to play a large part in the region's industrial renaissance. It has the space, raw materials and water that are increasingly hard to find in the Northeast and a labor supply noted for skill and adaptability.

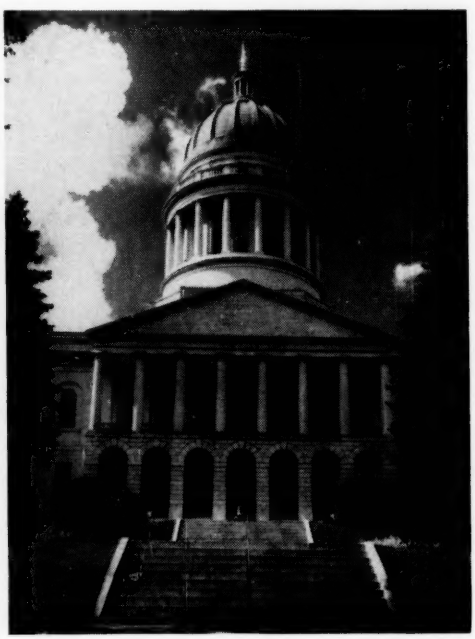
A REFERENCE STUDY BY

INDUSTRIAL DEVELOPMENT MANUFACTURERS RECORD

THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION
CONWAY PUBLICATIONS, INC · 2592 APPLE VALLEY RD. · ATLANTA 19, GA.

MAINE

After driving a little over an hour from Boston or a morning from New York, you are in Maine. Once there, you have your pick of all-year recreational opportunities, industrial sites in small cities and towns where the pace allows for relaxation and creative thinking, and a cooperative labor supply with century-old skills.



John H. Reed, present occupant of Maine's dignified but not pompous State House, disproves another misconception about the state — that only old men have anything to say about things. He was inaugurated Governor on his 40th birthday. Concerning industry he says, "We in Maine are making every possible effort to encourage the location of new industries and branch plants here, while at the same time, we are providing all practical assistance to existing firms with an eye toward expansion."

By Frank H. Stedman

the northeast's big back yard

Maine's fascination stems partly from its way of eluding easy classification. This raises no problems for its residents, since (a) they are already there, and (b) Maine is obviously in a class by itself.

Not a large state by national standards — smaller than average, in fact — Maine is enormous by New England calculations, being almost the size of the other five states put together. Its famous rock-bound coast winds so deviously in and out of bays, coves, estuaries and hundreds of islands that it takes nearly 3,500 miles to cover the airline distance of 228 miles from Kittery to Eastport.

The state combines areas with well over three hundred years of continuous settlement with a large tract in the center and northwest that has no permanent population and is a sportsman's paradise. It has large-scale commercial farming areas where potato fields stretch for miles, and residential farms where many summer evening hours are devoted to caring for a few rows of sweet corn. The corn, incidentally, is as much treasured by gourmets as the lobster.

Unlike the rest of New England, the Pine Tree State has an impressive natural resource base, but unlike some areas with a large resource base, much of its industrial structure is based on imported raw materials.

Wherever you turn, the state is full of the unexpected, the unusual, the refreshingly different. This very definitely extends to the people, who glory in an individualistic tradition but who pitch in together to work out reasonable solutions to genuine problems.

People from Maine have sometimes been described as Texans in reverse, for a good share of their vast stock of humor consists of understatement, and they are apt to apologize for things of which they are secretly and rightfully very proud. They are not inclined to accept anyone's word for his own self-importance and are adept at deflating pomposity. Partly for this reason they have a long record of good state and local government.

339 Years of Growth

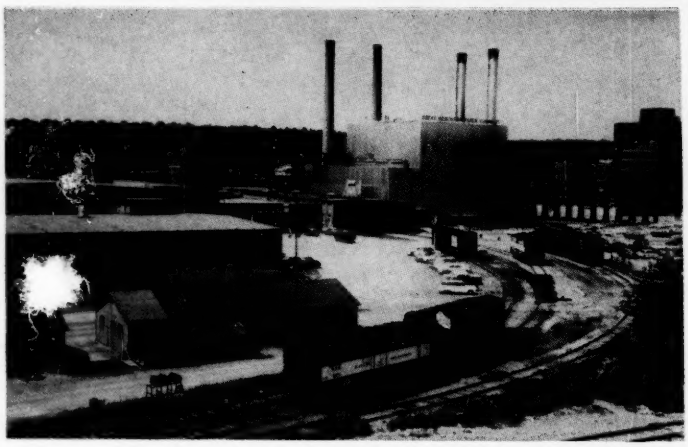
Maine's fisheries attracted early attention to the area, and though the attempted settlement at Popham in 1607 failed, permanent settlement goes all the way back to 1622.

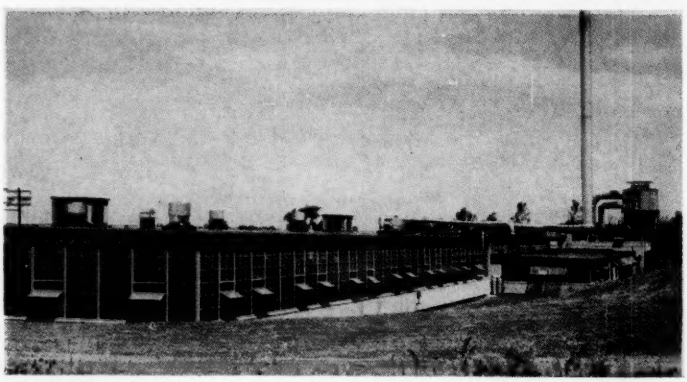
Even during its first two centuries, when it was the District of Maine and was theoretically governed by Massachusetts, the Down-Easters waged their own little private wars against the French in Acadia and Quebec, and pretty much ran their

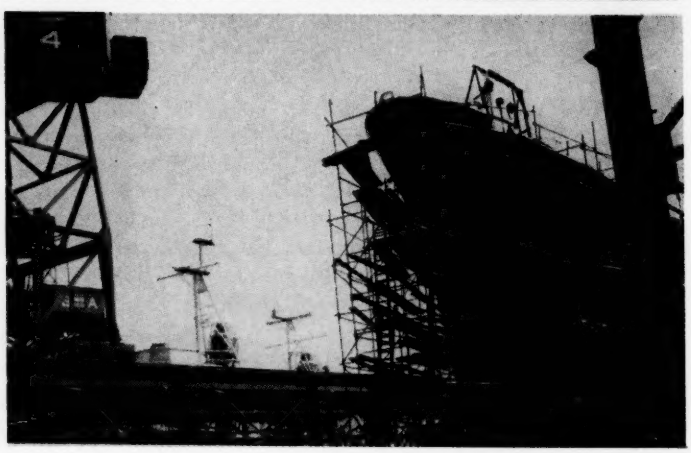
(Continued on Page 30)

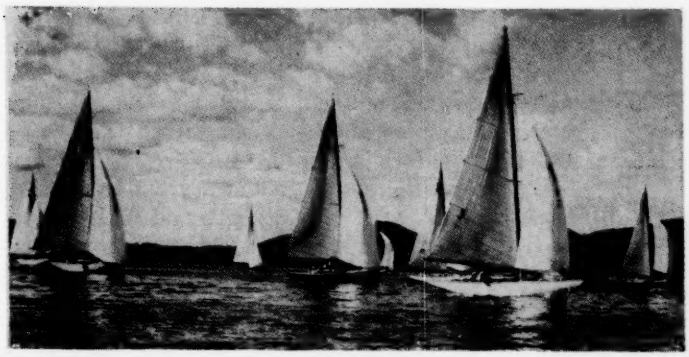
THE INDUSTRIAL BIG FIVE

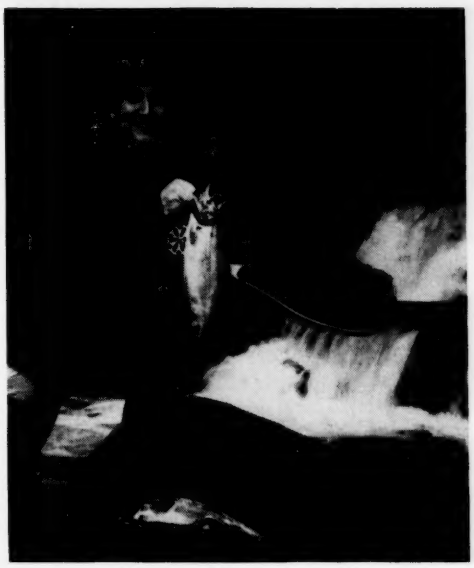
The leading industries in the state are textiles, paper, shoes, shipbuilding and food products — although not in that order. Examples of each are the Bates mill in Lewiston, Great Northern paper at Millinocket, Commonwealth Shoe and Leather at Gardner, the Bath Iron Works and Burnham and Morrill's plant at Portland making baked beans.



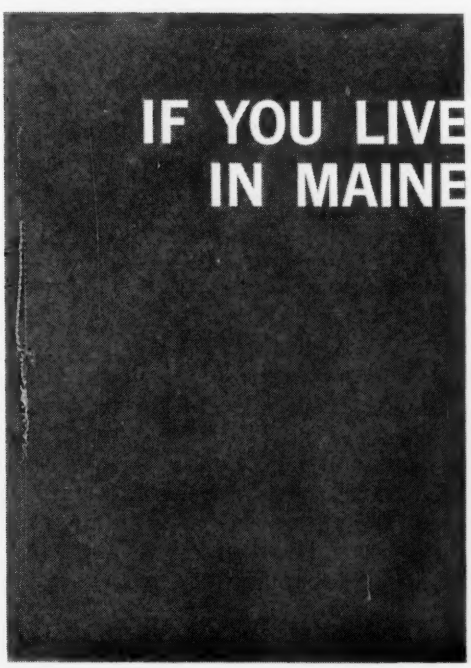








From yachting to hunting for big game or canoe trips through wilderness lakes, nearly any conceivable recreation is possible, each in its turn.



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own affairs. Only in 1820 did they conform to the standardized pattern of rapidly developing areas by becoming a state.

As late as 1842, the border with Canada remained unsettled, and some groups in Maine still entertained the notion of duplicating Wolfe's conquest and extending the state's boundaries to — say, for a start, Hudson Bay.

By this time every little coastal harbor had its fine houses, many of them topped by a widow's walk where a watch would be kept for a long-awaited ship, built locally and now engaged in the China trade, in whaling or in some other equally perilous but lucrative venture.

A little way inland the falls of the rivers had been harnessed by hundreds of mills, turning out a continuous flow of textiles, wood products of all descriptions, leather goods and a variety of other manufactures.

Most of southern Maine was in farms, with sturdy white frame houses running back through a succession of sheds to a large barn filled with last summer's hay.

Elsewhere the precursors of Paul Bunyan were felling huge white pines and rafting them down to the river ports, notably to Bangor, which preceded Muskegon, Green Bay and Tacoma as the lumber capital of the country.

In the years since then, railroads and paved highways have penetrated to all settled parts of the state, the paper industry has come into its own, the fishing industry has been revolutionized by refrigeration and quick-freezing, and a sizeable metal-working industry has grown up — much of it connected with shipbuilding.

If there has been some decline in the textile industry, there have been major gains in apparel, continued strength in leather goods, and more recently a strong trend toward electronics and other metal goods.

Meanwhile tourism has burgeoned into a major source of income, and opportunities for further expansion are practically unlimited due to the proximity to large urban areas and the great expanses of unspoiled country.

The nation-wide trend toward outdoor living and the tendency of industry to move to areas that offer a variety of recreational opportunities is bound to work in Maine's favor. In comparison with recreational areas in the South and West, Maine has the advantage of good access to the large market. Megalopolis, the compound city of more than 30 million people that extends from Hampton Roads to north of Boston, actually penetrates into Maine itself according to some calculations.

World War II brought about a great expansion of shipbuilding, not only at Bath and Kittery but at South Portland, where 30,000 were employed at the wartime peak, and metal-working skills were widely spread among the state's labor force. The inevitable post-war cutbacks caused a migration of part of this body of skilled labor to other metal-working areas, notably Connecticut and central and western Massachusetts.

But Maine ties do not weaken quickly and a surprisingly large return flow of former State-of-Mainers quickly materializes whenever a plant opens in the state that could make use of the skills acquired originally in Maine but practiced elsewhere.

This also applies at technical and managerial levels and the Department of Economic Development at Augusta maintains a coded list of potential engineering and professional manpower who are looking for an opportunity to return — or go — to Maine.

Since the pace of living is more moderate, the tensions less and the cost of living somewhat lower than in many of the major metropolitan areas, people frequently will give up higher-paying jobs elsewhere to go to Maine — a factor not to be overlooked in recruiting hard-to-find specialists.

Summer / Winter Playground

The marine influence on Maine's climate makes it the mildest for its latitude in the eastern United States. The whole coastal area has January mean temperatures above 20 degrees. After leaving Maine, the 20-degree isotherm for January dips gradually southward and reaches a point in the interior of the country more than 200 miles south of Eastport.

On the other hand, in July only a few inland stations in Maine have averages as high as 70 degrees, whereas in the continental interior almost all stations have more than 70.

The combination of mild summer weather, fresh and salt water bodies, and a high percentage of the land in forest makes the state enormously popular as a vacation area, not merely for the mass market in the nearby metropolitan centers but for the whole eastern half of the continent. The Bar Harbor social and artistic colony, Acadia National Park, and many of the more sought-after summer camps for boys and girls draw from all over the country.

Maine also has a good share of the area of the upper Northeast where skiers can rely on adequate snowfall and can be sure of access because of efficient snow removal on the highways. In protected locations in the mountains, skiing on corn snow lasts well into the spring.

Both spring and fall have their ardent devotees in Maine, either for the flowering trees and meadows in April and May or the brilliant coloring of the maples, beeches, and oaks against an evergreen backdrop in October. Hunters invade the state in large numbers every fall and some apprehensive farmers equip their animals with signs reading "This is a Cow."

43-degree Water

Maine is in an exceptionally favorable position with regard to the quantity of available water. The rainfall ranges between 35 and 50 inches in different parts of the state, and is unusually evenly distributed through the year. The large number of lakes, many of them sizeable, helps to produce an even flow, although there is of course a high-water period in the spring when the snow is melting.

Since most of the state is underlain by crystalline rocks, with relatively little limestone, the water is generally very soft; the median hardness value of 89 surface supplies tested recently was 20 parts per million. Ground water and water from large lakes with little temperature change averages 43 degrees, making it ideal for cooling purposes.

Many favorable sites are available where clear, clean water can be had in large quantities. Some pollution exists on the lower courses of some of the main rivers, but legislation now being adopted — with the backing of the paper industry, incidentally — will go far to correct this.

Technical surveys of ground water resources are now being undertaken by the U. S. Geological Survey. Large areas have glacial sands and gravels along old stream courses and in some cases along existing ones that yield excellent supplies.

Forests, Fields and Fish

On its 17 million acres of forest land, Maine leads all states in the northeastern quarter of the country in most indices of timber resources and production — particularly in the important softwood sector. At the end of 1958, the state had 205 million cords of standing pulp wood, nearly half of its spruce and balsam fir, and 30 billion feet of

(Continued on Page 34)

SOME OF MAINE'S LEADING INDUSTRIAL EMPLOYERS

FOOD

Birds Eye Division, General Foods—Caribou
Burnham & Morrill—Portland, South Paris
Forty-Fathom Fisheries—Rockland

TEXTILES

Bates Manufacturing—Lewiston, Augusta
Pepperell Manufacturing—Biddeford, Lewiston
Worumbo Manufacturing—Lisbon
Wyandotte Worsted—Waterville
Guilford Woolen Mills—Guilford
Eastland Woolen Mills—Corinna
W. S. Libbey—Lewiston
Knox Woolen—Camden
Kennebec Mills—Fairfield

WOOD PRODUCTS

Diamond National, Diamond Match Division—Dixfield, Oakland
Allen Quimby Veneer—Bingham
Forster Manufacturing—Mattawamkeag and Strong
C. B. Cummings—Norway
Wilner Wood Products—Norway
Paris Manufacturing—South Paris
Brewer Manufacturing—Old Town

PAPER AND PULP

Great Northern Paper—Millinocket and East Millinocket
Oxford Paper—Rumford
S. D. Warren—Westbrook
Scott Paper, Hollingsworth & Whitney Division—Winslow
Standard Packaging, Eastern Fine Paper Division—Brewer, Lincoln
Fraser Paper—Madawaska
St. Regis Paper—Bucksport
Hudson Pulp & Paper, Kennebec Pulp & Paper Division—Augusta
Penobscot Chemical Fiber—Old Town
St. Croix Paper—Baileyville
Keyes Fiber—Waterville

SHOES AND LEATHER

Clark Shoe—Auburn
Kessler Shoe—Kennebunk
Livermore Shoe—Livermore Falls
Shapiro Brothers Shoe—Auburn
Knapp Brothers Shoe—Lewiston
B. E. Cole—Norway
Freeport Shoe—Freeport
Gardiner Shoe—Gardiner
Commonwealth Shoe and Leather—Gardner
Medwed Footwear—Skowhegan
R. P. Hazzard—Augusta

METAL GOODS

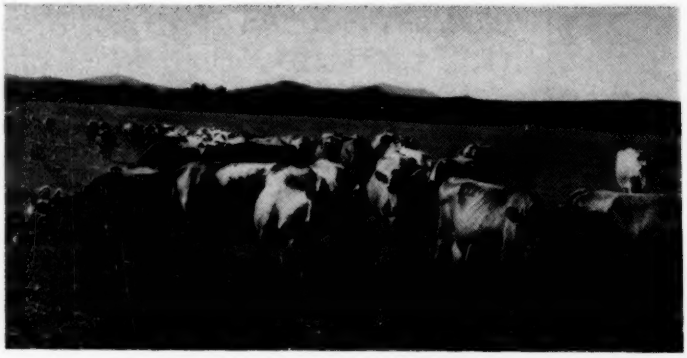
Kittery Naval Shipyard—Kittery
Bath Iron Works—Bath and Brunswick
Raytheon—Lewiston
Portland Copper & Tank Works—South Portland
Hyde Windlass—Bath
Saco-Lowell Shops, Automotive Division—Saco
Fayscott-Landis Machine—Dexter
Sylvania Electric—Waldoboro
American Can—Portland
Burrowes Corporation—Portland
American Hoist & Derrick, Thomas Laughlin Division—Portland
Airtex Products, Portland Co. Division—Portland
Southworth Machine—Portland
Bancroft & Martin Rolling Mills—South Portland
Colonial Aircraft—Sanford

MISCELLANEOUS

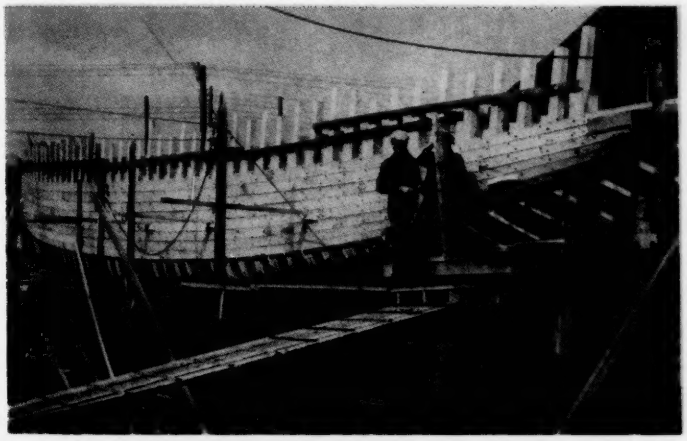
Hathaway Shirt—Waterville
Sanford Plastic— Sanford
American Marietta, Dragon Cement Division—Thomaston
Wasco Chemical—Sanford
U. S. Gypsum—Lisbon
Northern Chemical Industries—Searsport

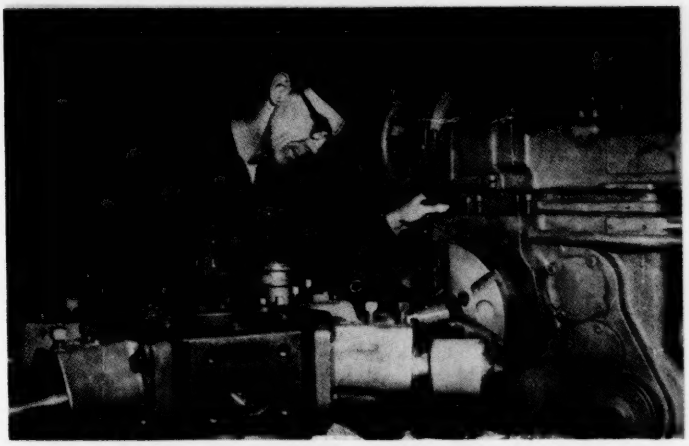
Maine's lobsters and potatoes are world-famous and there is plenty of room to raise dairy cattle and cut pulp wood. Apart from stone and other building materials, the state's mineral resources are only beginning to be probed, with a number of large companies interested in non-ferrous ore showings.

A WASTELAND?

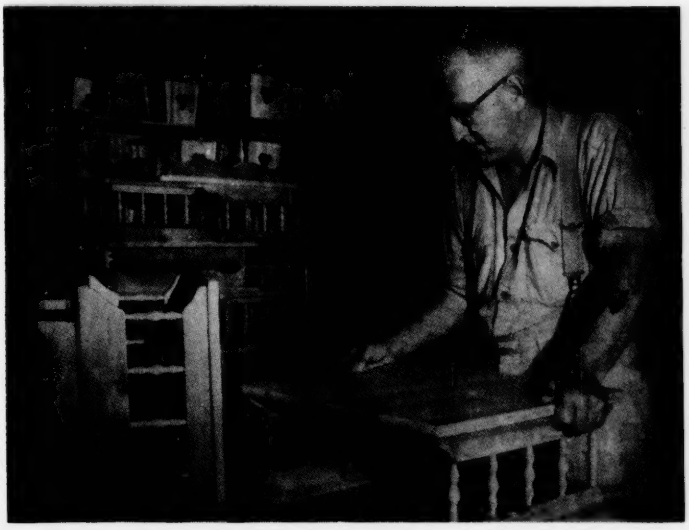


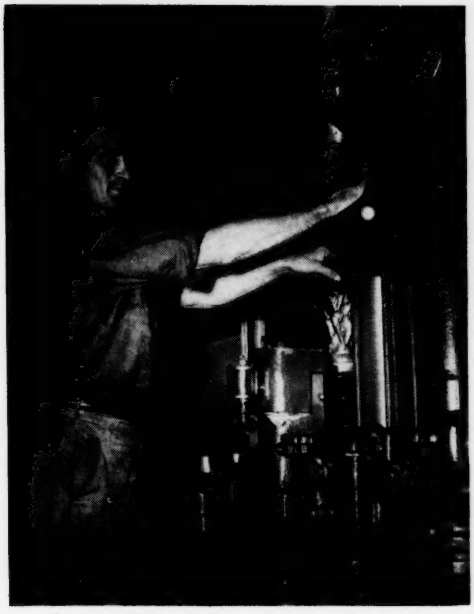
MEN AT WORK

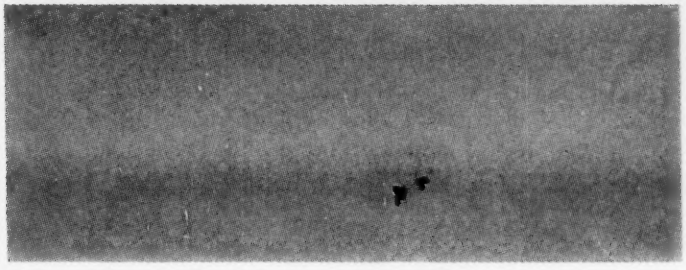




The small plants and small urban centers of the state have perpetuated a tradition of skilled and painstaking workmanship, low turnover, and easy labor-management relationships. Living costs are lower than in metropolitan areas, and hence wages are also at reasonable levels.







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sawtimber, of which more than half was spruce, white pine and balsam fir.

Forest industries, led by paper, account for 35 per cent of the state's employment. Nearly all the commercial forest land is in private ownership; large sections of the wilderness area are owned by the big paper companies, while smaller holdings prevail in the settled areas.

In 1958 annual growth amounted to 7.2 million cords as opposed to a cut of 3.0 million cords. Although that year's cut was down because of the recession, and there has been an excess of cutting over annual growth in some species, the overall surplus of growth over cutting is very large. There is thus considerable room for expansion of forest industries.

Maine has always been one of the leading fisheries states. Herring, which are canned as sardines, and lobsters are the main source of income. Rockland and Rockport are major landing points for lobsters, and Portland and the eastern end of the coast are important canning centers for sardines, but many small harbors along the coast play a part. The value of the catch is about 17 million dollars, some 5 per cent of the national total.

Maine's extensive tidal flats, especially toward the east where the tidal range is great, have a bright future in their Irish moss and kelp, which has given rise to a new industry producing food and feed additives and fertilizer materials.

Mineral resources have not been extensively developed. The crystalline rock underlying most of the state precludes any important discoveries of coal, oil or gas, but there may well be deposits in Maine similar to the important metallic and asbestos resources recently found in nearby parts of Quebec and New Brunswick.

Preliminary investigations involving new geophysical methods such as magnetic surveys are now underway. What may be a substantial nickel deposit has been located in Union, near Rockland, and a number of large concerns are expressing interest in other parts of the state.

The leading product at present is limestone at Thomaston for the cement plant there. The slate quarried at Monson has important electrical applications, and there are a number of granite quarries. Pegmatites in the western part of the state have been important sources of feldspar.

Potatoes from Aroostook County are the state's outstanding agricultural specialty and make the county one of the richest farming counties east of the Mississippi, but the state derives more than half of its farm income from livestock products, notably poultry. The broiler industry has come forward rapidly in recent years and is now a big business in the central coastal counties and parts of the southwest. Dairying is important in the southwest, both for the local market and for Boston.

Specialty crops include blueberries, especially from the eastern coastal area, and sweet corn and beans, and these help to support a large canning and freezing industry, which also takes a considerable share of the fish. Any visit to Maine is incomplete without a clambake, where lobsters, clams, and fresh-picked local vegetables are baked in seaweed over a driftwood fire and topped off with blueberry pie.

Easy to Get To

Rail service is provided by the Boston and Maine from Portland southward, by the Maine Central from Portland eastward across the state to Calais and Vanceboro on the New Brunswick border and westward to the White Mountains, and by the Bangor and Aroostook in central and northern Maine.

The Grand Trunk (Canadian National) has a line from Portland to Montreal and the Canadian Pacific has an east-west line across central Maine to provide a direct connection between Montreal and St. John, New Brunswick.

Maine has been fore-handed in new highway construction. The Maine Turnpike now runs from the New Hampshire line to Portland and on to Lewiston-Auburn and Augusta, and Interstate 95 is completed between Augusta and Waterville. When it is finished it will continue eastward to Bangor and thence northward to Houlton. Southward from Augusta, Interstate 95 will provide an alternate route to Portland by way of Brunswick and the coast.

The high speeds possible on the new highways mean that Augusta is now only three hours and Portland is only two hours away from Boston, with New York four hours farther along.

Northeast Airlines serves eight points in the state — Portland, Lewiston-Auburn, Augusta, Waterville, Rockland, Bangor, Houlton and Presque Isle — and in the summer a ninth — Bar Harbor. There are six Boston-Portland flights daily each way and also New York-Portland, Boston-Lewiston, Boston-Augusta, and Boston-Bangor non-stop flights.

Maine's frontage on the world's most heavily

traveled sea route — the North Atlantic shipping lane — is sometimes overlooked, but again and again in the state's history it has played a dominant role. At present the import of petroleum products for local use and of crude oil, which is sent to the Montreal refineries by pipeline, is the main traffic.

Maine's ports are ice-free, whereas the St. Lawrence is closed for several months every winter. For products such as Venezuelan crude oil destined from the South Atlantic to Canada, a Maine landing point represents a considerably shorter haul than the journey around the Maritime Provinces and up the St. Lawrence.

Portland's commerce in 1958 totalled 15.6 million tons, while Searsport's was 869,000 tons and Rockland's was 111,000 tons. Apart from petroleum products and coal from Hampton Roads, leading items are china clay from Cornwall, wood pulp from Scandinavia and sulphur from the Gulf Coast for the New England paper industry, and exports of grain, flour, scrap iron and newsprint.

Portland's harbor has a main channel of 35-foot depth at mean low water. Facilities include the Maine State Pier of the Maine Port Authority, with transit sheds covering 200,000 square feet, and the Maine Central's Portland Terminal Company wharves, with a covered shed area of 100,000 square feet and facilities for handling bulk cargoes.

Portland, through its Grand Trunk connections direct to the Middle West, has rates on import cargoes for the Central Freight Association (substantially the Great Lakes States) that are 3 cents lower per hundred pounds than those of Boston and New York and 2 cents lower than Philadelphia.

Kilowatts and B.t.u.'s

The main utility in the state is Central Maine Power, with headquarters at Augusta. It serves most of the southwestern and central parts of the state, including the main urban centers other than Bangor. Its generating capacity is over half a million kilowatts, about equally divided between thermal and hydroelectric. It has two large thermal plants on the coast at Wiscasset and Yarmouth, the latter recently having been doubled in size, and two major hydro plants on the upper Kennebec.

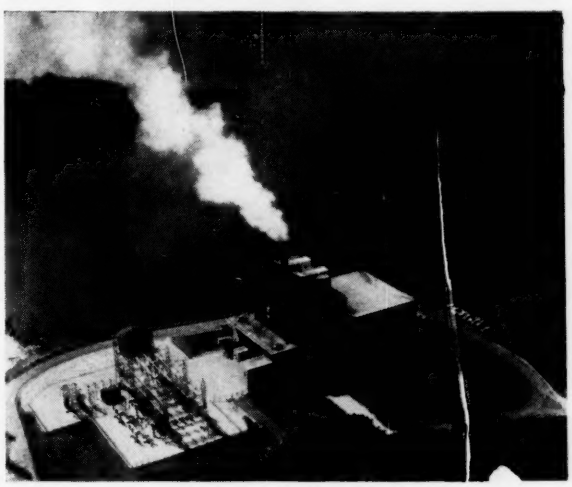
Other important power companies are Bangor Hydroelectric in eastern Maine and Maine Public Service in Aroostook County. Despite the name

(Continued on Page 38)

Saco-Lowell Shops have transformed their Maine operations from textile machinery to automotive parts and military hardware and have built a new plant at Saco.

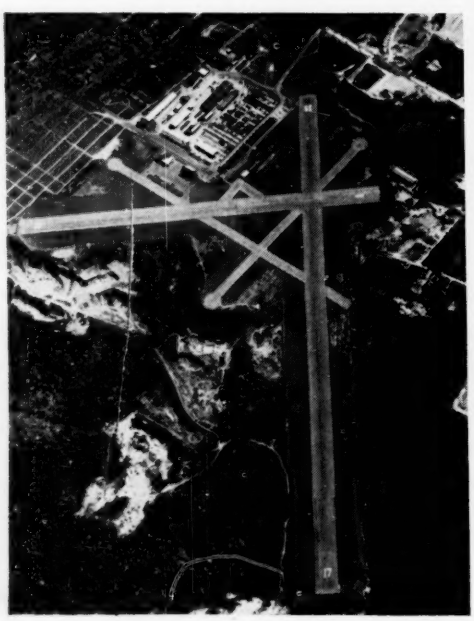
Largest industrial center in the state is Lewiston-Auburn, with 70,000 people. Lewiston, in the foreground, is separated from Auburn by the Androscoggin River, whose falls gave rise to the power development on which Bates Manufacturing and other textile firms were originally based.

Central Maine Power's thermal plant at Yarmouth, on Casco Bay, has recently been doubled in size to 88,000 kilowatts to help meet the rising demand in the Portland area.



INACCESSIBLE?

Hardly. Portland handles more than 15 million tons of cargo a year, much of it crude petroleum which is sent on by pipe line to Montreal refineries. The Maine Turnpike already extends 106 miles from the state line to Augusta and Interstate Route 95 will continue the line northward to Aroostook County. Note the new plants that have located near the Lewiston interchange. Railroads serving the state include the Bangor & Arostook, Boston & Maine, Maine Central and both the Canadian National and Canadian Pacific. Northeast Airlines serves eight airports all year and a ninth in summer. Quick dispatch of snow plows keep even the country roads open through the winter.



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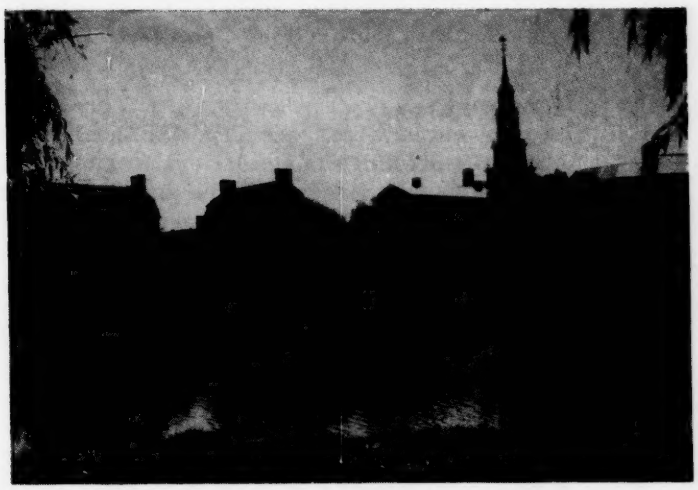
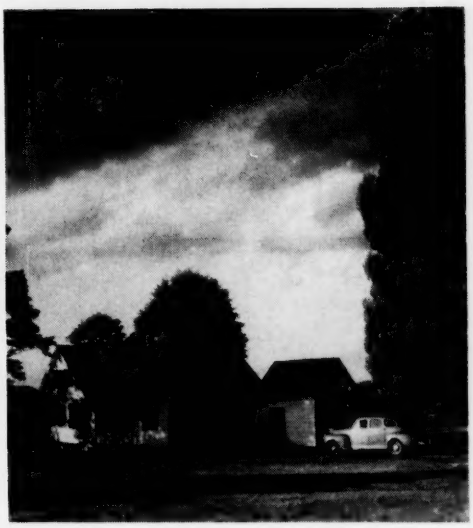




Not necessarily. For some centuries Maine residents have known how to build roomy, comfortable houses in town and country, handsome college campuses like Colby's at Waterville, and quaint spots for the summer visitor.

LIVE IN TENTS OR IGLOOS?

Small plants such as this one in Randolph, near Augusta, fit naturally into the Maine scene. Almost all kinds of industry are represented, and many plants can serve as sub-contractors to larger industries.

Factory space is available both in vacant plants and in new plants built by community funds on a speculative basis, such as this one in South Portland. Up to 100 per cent financing is obtainable for new industrial plant construction, through local development agencies and the Maine Industrial Building Authority.

OPPORTUNITIES IN MAINE

As Megalopolis — the vast compound city of 30 million people stretching from north of Boston to Hampton Roads—continues its relentless growth, Maine stands to gain a goodly share of new industry. Its two chief advantages are attractive living conditions in a prime recreational area close to Northeastern markets and a labor supply with a long background of industrial experience in an atmosphere of favorable labor-management relations.

Other significant advantages are ready access to Canadian and overseas markets, notable reserves of several industrial raw materials, the large quantities of available high-quality water and the record of good state and local government.

The advantages are greatest for companies not involved in long land hauls of bulky raw materials or finished products and without heavy power and fuel requirements. Conditions appear to be especially favorable for the electronics industry, particularly for those phases of it requiring sites near but not immediately adjacent to major research centers. Other types of small metal goods, plastics and of course wood products would also find favorable conditions.

Heavy industry cannot be ruled out for the coast, in light of recent developments in eastern Canada, especially if the product should be intended primarily for export.

Maine has, close to the Northeastern market, what an increasingly large number of manufacturers looking for.

(Continued from Page 35)

of the former, both actually rely mainly on thermal generating equipment.

Manufactured gas is available in the Portland area (Portland Gas Light Company — carburetted blue gas), in Lewiston-Auburn (Lewiston Gas Light Company — carburetted water gas) and the Bangor area (Citizens Utilities Company — oil gas). The Biddeford & Saco Gas Company pipes propane-air through local mains in those two cities.

Maine's 100,000 manufacturing employees are concentrated in Androscoggin (Lewiston, Auburn), Cumberland (Portland), Penobscot (Bangor, Millinocket), Kennebec (Augusta, Waterville) and York (Biddeford, Saco, Sanford, Kittery) counties. Taken together, these have about 60 per cent of the total. Even so, there is a goodly scattering all over the state, especially in wood products and canning.

Industrial Newcomers

The largest plants are the Kittery Naval Shipyard, which does not appear in the statistics as it is a government establishment, the Bath Iron Works, Raytheon, Bates, Pepperell, Great Northern, S. D. Warren and Oxford Paper. Recent new plant investment has been greatest in the paper mills, where much new equipment has been installed.

Shoes and other leather goods, most of which are made in medium-sized plants employing 250 to 750, account for about one-fifth of the industrial labor force, with paper and pulp, textiles and lumber products ranking not far behind.

Raytheon, the major industrial newcomer on the scene, is indicative of a number of the recent trends. First of all, it is in electronics, which is one of the leading growth industries in New England and the country as a whole.

Secondly, it is located on the outskirts of an established center where the labor force has highly developed industrial skills. The plant has easy access to the Maine Turnpike, and is a long low building on a large site with room to expand. In one direction it looks out on a substantial farm with traditional farm buildings that might have been painted by Grandma Moses. In another direction it looks out on woods.

Two other recent industries are illustrative of increasing diversity in the Maine scene. One is Marine Colloids, in Rockland, where continuing research is finding many new applications of Irish

moss and kelp, a resource which lay unused for centuries. Another is the complex of potato processing plants, involving an investment of $6 million, now going up in Aroostook County, notably at Houlton and Presque Isle.

Caps and Gowns

Even though the state is well within reach of the great educational complex in the Boston area, there has been a considerable growth of Maine's own colleges. The University of Maine, which has its chief campus at Orono near Bangor and an expanding branch at Portland, has 5,000 enrolled and is the largest educational institution north of Boston. It is the chief center of graduate training in the state and is currently working out a program with Raytheon in Lewiston whereby it will send instructors and grant credit for specialized courses to be conducted at the plant.

The best known liberal arts schools are Bates at Lewiston, Bowdoin at Brunswick and Colby at Waterville. The latter two date back to 1794 and 1813, respectively, before Maine attained statehood. Others include Husson at Bangor, Nasson at Springvale (Sanford), Ricker at Houlton, St. Francis at Biddeford and Westbrook Junior College at Portland.

Specialized training is available at Maine Maritime Academy at Castine; at Portland University, which has a law school; at teachers colleges in Presque Isle, Farmington, Fort Kent, Gorham and Machias; and most recently at Maine Vocation-Technical Institute at South Portland, where emphasis is on electrical and metal-working skills.

Consolidation of schools in the rural towns is going on apace, especially for the higher grades, and many new schools have been built in the expanding suburban areas.

To go with the state's natural recreational advantages, which are undoubtedly its chief attraction to residents and non-residents alike, a whole complex of man-made recreational and cultural facilities have been devised. These range from the Scarborough Downs and Old Orchard Beach to the world-famous Kotzschmar organ in the Portland municipal auditorium and the many summer theaters where Broadway stars appear regularly. Many artists make Maine their home and landscapes by Winslow Homer and John Marin have helped to make the Maine coast one of the best-known meeting places of land and water this side of the Grand Canal.

An Editor's Note On Maine In Mid-June

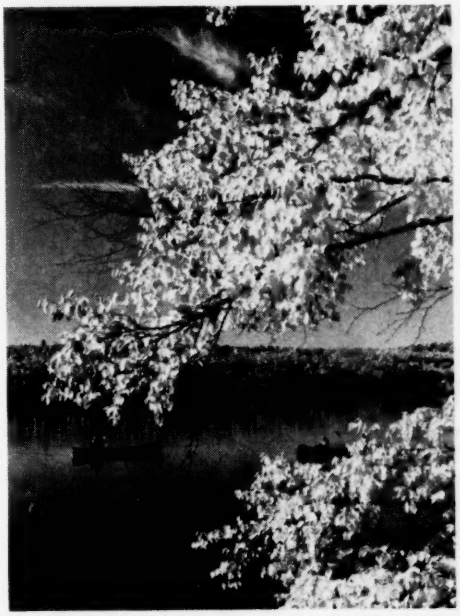
Among members of the ID editorial staff, it is persistently rumored that your editor deliberately selects the more interesting assignments and, in fact, times his travel to coincide with the seasons. Survey trips to Puerto Rico in mid-winter and urgent development studies in Canada in the summer are cited. This is, of course, totally without foundation and can only be explained as professional jealousy.

It was merest coincidence which found us leaving New York on June 13, the day the thermometer hit 96 and the power went off for four sweltering, air-conditionerless hours. With a radar steer from Newark Departure Control, we were off Teterboro, across Poughkeepsie omni, and quickly ticked off the check points at Springfield, Gardner, and Concord. From Portland to Augusta we did it the easy way, following the Thruway.

Here it was late afternoon and business offices were closed. The only sensible thing to do was swing on a 99 degree heading across Penobscot Bay and, half-an-hour later, put down at Bar Harbor. Shifting from Cessna to Avis, we reconnoitered Mount Desert Isle, from the white birch at Salisbury Cove to the deer crossing near Hulls Cove. Lilac bloomed among the firs waving in the brisk onshore breeze. The temperature stood at 69.

For site-seeking executives desiring also to reflect on the advantages of Maine locations, we recommend the Grandview motel, perched above Bar Harbor. Here we watched the tides sweep in across Frenchman Bay while launching a frontal assault on a broiled lobster garnished with new potatoes which did not come from Idaho.

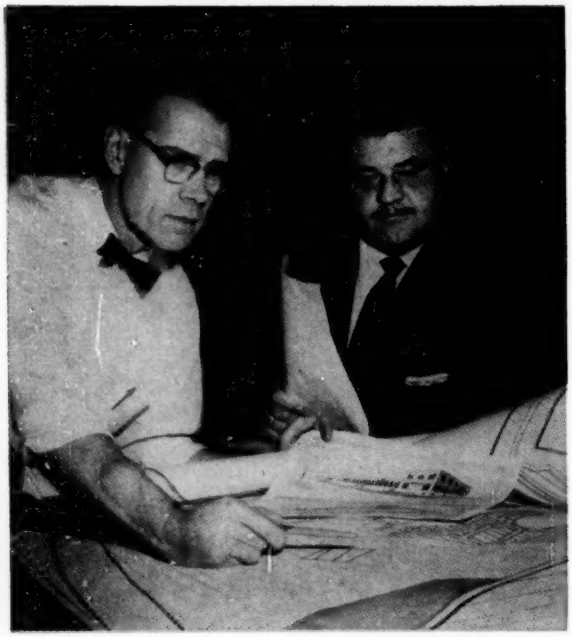
After a suitable respite, we continued our survey, first swinging over the scenic coastal areas and then dropping into Old Town for fuel before taking a fresh look at the interior. Half a dozen small float planes moored in the river off the end of the North-South runway offer evidence here of attractions in the lake country.



For a first-hand look at the famed Maine woods, we selected a direct route from Bangor to Princeton. On one stretch of some 50 miles we saw neither a highway nor a village. Occasional lake-side camps serve as bases for fishermen and hunters.

Continuing our investigation, we spent a week on a circuit which took us completely around Maine, North along the New Brunswick border, then West across the St. Lawrence valley. We saw a fascinating region, virtually untouched, only a few hours from Manhattan.

Naturally, we plan to go back to several spots in this area for future surveys. Meanwhile, we hope this brief report will dispel rumors about our dodging the tough, unpleasant assignments. After all, we were at Bar Harbor a full two weeks before the season officially opened.—H.M.C.



New plants to the value of $6.3 million have been put up since 1957 with mortgage insurance by the Maine Industrial Building Authority, whose Manager, Roderick O'Connor, is pointing out the site of a proposed plant to James Pelletier, Director of the Industrial Development Division of the state's Department of Economic Development.

This reference report on industrial location factors in Maine was prepared by ID under the auspices of the Maine Department of Economic Development. Reprints may be obtained from Lloyd K. Allen, Commissioner, Department of Economic Development, State House, Augusta, Maine.

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- Maine Metal Working Industry—64 pages, October 1960
- Maine Printing and Publishing—40 pages, February 1960.
- Maine Wood Products Industry—72 pages.
- Aroostook County Industrial Fact Book—12 pages, 1960.
- Development Resources of the Central Kennebec Valley—24 pages, July 1960.
- Development Resources of the Penobscot Region—28 pages, October 1959.
- Industrial Resources of Southern Maine—30 pages, looseleaf.
- Washington County Industrial Fact Book—20 pages, revised April 1961.

Armour Research Foundation of Illinois Institute of Technology, Technology Center, 10 West 35th Street, Chicago 16, Illinois.
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- A Sampling of Regional Wage Rates by Job Title—50 pages, 1960.
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- Greater Portland Planning Region: Economic Problems and Opportunities (prepared for Greater Portland Regional Planning Commission)—117 pages, 1960.

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- MIBA—24 page leaflet.

U. S. Department of Agriculture, Northeastern Forest Experiment Station, Upper Darby, Pennsylvania.
- The Timber Resources of Maine—75 pages, 1960.

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- Fact Manual of the Portland Region—100 pages, looseleaf, 1959. Price—$2.00.

Houlton Chamber of Commerce, Houlton, Maine.
- Factual Data, Houlton, Maine—67 pages, looseleaf, 1959.

The following Maine communities have had audits accepted by the International Community Audit Registry: Auburn, Bangor, Freeport, Portland, Presque Isle, Scarborough, South Portland.

No State Income Tax

The state's healthy respect for industry as a necessary and desirable part of its economic base is shown in a number of ways. State revenue is mainly derived from a 3 per cent sales tax and from gasoline, liquor and tobacco taxes — there is no state income tax, individual or corporate, and no local sales, income or payroll tax. Property taxes are levied only by local governments.

The Maine Industrial Building Authority, which was set up in 1957, offers industries a chance to obtain 100 per cent financing of new plants and expansions. Up to $1 million of a mortgage loan will be insured by the Authority at a premium of one per cent. Up to 90 per cent of the cost of a plant can be insured in this manner; the remaining 10 per cent may be available from one of the 14 local industrial development corporations.

Not least of the ways in which Maine helps industry is the work of the Department of Economic Development, headed by Commissioner Lloyd K. Allen, which carries on research dealing with community facilities and resources, industrial machinery installed in and products made by Maine plants and on other matters of interest to site-seekers. It also has an active promotional program and does a great deal to publicize Maine products. Its regional brochures are particularly valuable assemblages of information, with excellent maps and charts, grouping the data on all communities in each of the several major economic regions of the state.

INDUSTRIAL DEVELOPMENT MANUFACTURERS RECORD

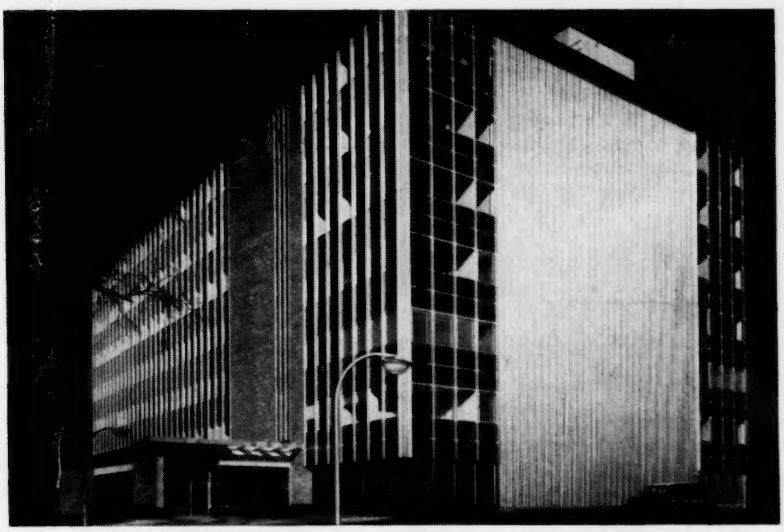
MANUFACTURERS RECORD

THE INTERNATIONAL SUMMARY OF PLANT LOCATION NEWS ESTABLISHED 1882 VOLUME 130 NUMBER 8

Industrial development research facilities are active this month, promising a broadened scope of future plant construction activity.

Internationally, Japanese research facilities attract attention as two sizeable projects were recently completed. At Takeyama, an industrial radiation center cost $1.5 million; at Tokyo, the $8.8 million Toshiba Central Research Laboratory provides for electrical and electronics development.

Nationally, the Western New York Nuclear Research Center will locate at Ashford, Northern Cattaraugus County. Governor Rockefeller described the site as being "very close to the heart of one of the most active regions in the United States from the standpoint of atomic development", surrounded by "all of the Nation's five full-scale atomic power plants." Although final details of plans are undetermined, the 35,000-acre facility will provide storage for atomic energy fuels, by-products and wastes. Private industry, scientific organizations and government agencies are expected to install atomic industrial and research facilities here. Considerations in selecting the site covered points of public health, future industrial construction, land values, transportation, geological conditions and water supply.



Kodak Research Laboratories in Rochester, New York, has completed the new Physics Building announced last March in ID. It will house more than 400 staff members of the Physics Division and is equipped with the latest facilities for many new lines of research.

Also to be noted this month are the following plant locations:

KENAI PENINSULA, ALASKA. Standard Oil Company of California with its operating subsidiary, Western Operations, Inc. will construct a $20 million refinery to process 7,000 barrels per day of Swanson River Field crude oil. The new plant's capacity is to be 20,000 barrels per day. President H. G. Vesper, of Western Operations, said details of the plan are still under consideration.

MENDOTA, CALIFORNIA. Spreckels Sugar Company plans a $16 million best sugar factory on a 40-acre site in Fresno County. Vice President Guy Manuel indicated that 250 to 350 employees will be enlisted by Summer, 1963, when production begins. The annual payroll is estimated at $1.5 million. Spreckels owns 1,600 acres in the area, and expects sugar beet acreage of more than 25,000 to support the new plant. Daily slicing capacity is to be 4,000 acres.

AUGUSTA, GEORGIA. The Southeast's first synthetic detergents plant will be built by Proctor

& Gamble. The $4 million facility will be in production early in 1963, according to President Howard J. Morgens. Employment should reach 200, providing a $1 million annual payroll. The 283-acre site lies in the Miracle Mile Industrial District near Augusta.

The following is a summary of major industrial plant locations in the United States, Canada and overseas as reported to INDUSTRIAL DEVELOPMENT during the month of May, 1961, by industries and industrial development organizations.

Each new plant meets one of the following minimum requirements: 10,000 square feet of floor space, $100,000 building cost, 25 or more employees (warehousing facilities must meet one of the latter two requirements). Number of employees is indicated by the code: A (under 25); B (25-99); C (100-249); D (250-999); E (1,000 plus).

ALABAMA

Montgomery — Tennessee Packers Inc. (Frosty Morn Subs.), J. W. Camp, Plnt. Mgr.: meat packing & proc'g. Oper. date: late Spring 1962. 100,000 sq. ft. $2 million (D).

ALASKA

Kenai Peninsula — Standard Oil Co. of Calif. (Western Operations Inc., Subs., H. G. Vesper, Pres.): oil refinery. Plans in prog. $20 million (estimate).

ARIZONA

No Plants Reported.

ARKANSAS

El Dorado — Chase-Grocord Rubber Co.: rubber prod'ts. Plans announced. (C).

CALIFORNIA

Castroville — Jennings Radio Mfg. Corp., Calvin K. Townsend, Chm.: vacuum electric power switches; mfg. & lab. Compl. date (lab): Sept. 1961, compl. date (mfg.): Feb. 1962. $1.5 million. (C).

Los Alamitos — Federal-Mogul-Bower Bearings Inc., Arrowhead Prod'ts. Div., Samuel E. MacArthur, Exec. Ass't., 4411 Katella Ave.: Flexible aircraft & missile components; mfg., res., eng. Compl. date: Sept. 1961. 114,000 sq. ft. (3 bldgs.). $1 million.

Mendota — Spreckels Sugar Co., Guy Manuel, V. Pres.: beet sugar. Oper. date: Summer 1963. 40-acre site. $16 million. (D).

Mountain View — International Business Machines Corp.: advanced processing systems; tech. cntr. Constr. date: Fall 1962. Oper. date: end 1962. 20-acre site. 80,000 sq. ft. $1 million plus. (D).

Woodland — Bissinger & Co., Paul Bissinger, Offl., Dominick Radato, Mgr.: hide curing. Under constr. 50,000 sq. ft. $300,000.

COLORADO

Denver — American Kylon Corp., G. P. Gilkison, Head, 960 W. 48th Ave.: resin-derived prod'ts. In oper. 10,000 sq. ft. (A).

Denver — Continental Baking Co., Don Murray, Mgr., 62nd & Valley Hwy.: bakery prod'ts. Under constr. 185,000 sq. ft. $2 million (D).

Denver — Fleming & Sons of Colo. Inc., Gerry Waller, Mgr., 1100 W. 45th St.: corrugated paper prod'ts. In oper. 24,000 sq. ft. $175,000. (A).

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Atlanta 19, Georgia

Littleton — Metron Instrument Co., C. J. Sommer, Pres. & Gen. Mgr.: electronic & mechanical control & measuring instruments; designs & mfrs. In oper. 18,000 sq. ft. $250,000. (C).

CONNECTICUT

Hartford — Weyerhaeuser Co.: lumber. Under constr. 39,000 sq. ft. $400,000.

Sprague — Federal Paper Board Co.: paper board for folding cartons. Plans in prog. 185,000 sq. ft. $15 million. (C).

West Haven — National Biscuit Co., 45 Railroad Ave.: whse. In oper. $250,000. (B).

DELAWARE

Smyrna — Shell Oil Co.: refinery. Oper. date: Summer 1961. $80 million (initial invest.) (D).

DISTRICT OF COLUMBIA

No Plants Reported.

FLORIDA

Cocoa Beach — Brown Engineering Inc.: eng. for Saturn missile program. In oper. (B).

Hialeah — Charavelli Shoe Corp., Chas. G. Levine, Gen. Mgr.: children's & women's shoes, 3,400 sq. ft. (B).

Miami — El Avance Criollo, E. Mendez, Owner: Newspaper. In oper. (B).

Miami — El Mundo Inc., Amadeo Barletta, Publ. & Ed.: Newspaper. Oper. date: Oct. 1961. 750 sq. ft. (B).

Miami — Kaycor Dress Corp., Ben Kay, Pres.: dresses. In oper. 7,500 sq. ft. (B).

Miami — Richard Garment Co., Richard Elkman, Pres.: Dresses & blouses. In oper. 1,500 sq. ft. (B).

Miami — Squall King Mfg. Corp., Lenwell J. Bivins, Pres. & Gen. Mgr.: fiberglas boats. In oper. (B)

Ojus — Ships & Power Inc.: dismantling ships. In oper. (B).

Perry — Coastal Timber Land & pulp Corp., Finley McMillan, Pres.: hardboard, insulation board, etc. Constr. date: Summer 1961. 65,000 sq. ft. $4 million. (C).

St. Petersburg — Aero Precision Products Corp., Anthony J. Maiocchi, Pres.: electronic components. 7,500 sq. ft. $250,000. (B).

Sarasota — Diversities Inc., John Mason, Pres.: 3 basic assemblies or devices. In oper. (C).

Tarpon Springs — Tansey Co., John Tansey, Pres.: steel doors & partitions. Oper. date: 1961. 1.25 acres. (B).

GEORGIA

Augusta, Miracle Mile Ind. Dist. — Proctor & Gamble Mfg. Co., Howard Morgens, Pres.: synthetic detergents. Constr. date: early Fall 1961. Compl. date: early 1963. $4 million. (C).

HAWAII

Holsum Baking Inc., Lorring W. Dolim, Exec. V. Pres. & Mgr., Moanalua Rd. & Kamehameha Hwy.: bakery. Oper. date: Oct. 1961. $1.5 million.

IDAHO

No Plants Reported.

ILLINOIS

Morton Grove — Monogram Models Inc.: plastic hobby kits. Oper. date: Aug. 1961. 5% incr. floor space (reloc.). $1.3 million.

INDIANA

Ft. Wayne — Electric Autolite Co.: helicopter ignition systems. Oper. date: Aug. 1961. $600,000. (B).

Frankfort — Mallory Controls Co.: electronic parts. Oper. date: Nov. 1961. $1.5 million. (C).

Michigan City — Chicago Molded Prod'ts. Co.: custom molded plastics. $1 million. (B).

IOWA

Fairfield — Philco Corp., Robt. Austin, Plnt. Mgr.: commercial dryers. Oper. date: Summer 1961. (B).

Harlan — Western Iowa Pork Inc.: pork prod'ts. Oper. date: late 1961. 18,000 sq. ft. $500,000. (B).

Marshalltown — Electric Autolite Co.: pressure gauges. Oper. date: late 1961. 16-acre site. 30,000 sq. ft. (C).
Nashua — Hydro Tile Machine Co., N. T. Fosse, Plnt. Mgr.: tile making equip. Oper. date: Summer 1961. 18,000 sq. ft.
New Hampton — Great Atlantic & Pacific Tea Co.: egg procurement plant. Oper. date: Nov. 1961. 17,600 sq. ft. $200,000. (B).
Sioux City — North American Mfg. Co., C. Hansen, Offl.: farm equip. In oper. 66,000 sq. ft. $350,000. (B).
Spirit Lake — Berkley Co., Berkley Bedell, Offl.: fishing tackle, marine prod'ts. In oper. 83,000 sq. ft. $350,000. (D).

THE TOP TEN

The following ten states ranked highest in new plant announcements as reported to INDUSTRIAL DEVELOPMENT during the six-month period February to July. The figure to the right represents each state's actual six-month total.

1.	NEW YORK	161
2.	OHIO	91
3.	MASSACHUSETTS	89
4.	TEXAS	86
5.	ILLINOIS	79
6.	CALIFORNIA	69
7.	NORTH CAROLINA	66
8.	FLORIDA	60
9.	PENNSYLVANIA	54
10.	NEW JERSEY	44

KANSAS

Iola — Columbia Metal Products Co. Inc., Tom Cannon, Plnt. Supt.: aluminum storm doors & windows. In oper. (B).
Ulysses — Ulysses Co-op Oil & Supply Co., Harry G. Morton, Jr., Plnt. Mgr.: feed. Oper. date: Sept. 1961. $120,000.
Wichita — Cota-Matic Inc., Clarence Hooper, Pres., 512 E. 21st. St.: coating of aluminum & steel. In oper. (B).

KENTUCKY

No Plants Reported.

LOUISIANA

Baton Rouge — Micro-Tex Instruments Inc., Keith P. Lanneau, Pres., 550 Oak Villa Rd.: eng., lab & sci.-res. precision instruments & assoc. equip. In oper. 10,000 sq. ft. (B).
Chalmette — Southern Natural Gas. Co., M. V. Carmichael, Div. Supt.: Reid vapor pressure gasoline; absorption procsng. Oper. date: July 1961. $1.7 million. (A).
New Orleans — Kalvar Corp., 909 S. Broad St.: photographic & photosensitive film & paper, optical & photographic equip.; mfg., coating, production. Oper. date: March 1962. 22,500 sq. ft. $950,000. (B).
St. Landry — Cocodrie Gas Processing Plant: propane, butane & nat. gas. derivative; procsng. Over $1 million.

MAINE

No Plants Reported.

MARYLAND

Baltimore — Poland Bros.: Wood containers & paper bags. In oper. 200,000 sq. ft.
Cambridge — Textron Inc., Dorsett Marine Div., John Moore, Gen. Mgr.: fiberglas boats. In oper. 8-acre site. 80,000 sq. ft. $400,000. (C).
Cambridge — Western Printing & Lithographing Co.: yearbooks. Oper. date: Sept. 1961. 20-acre site. 45,000 sq. ft.
Hagerstown — Ward Leonard Electric Co., R. W. Lowery, Plant Mgr.: metal film resistors. In oper. 10-acre site. 15,000 sq. ft. (C).
Havre de Grace — J. M. Huber Corp.: chemicals res. lab. Plans in prog. 50-acre site. 20,900 sq. ft.

MASSACHUSETTS

Attleboro — Guyot Bros. Co.: jewelry. Oper. date: Oct. 1961. 20,000 sq. ft. (B).
Bedford — Sanders Assoc.: electronics res. & dev. Oper. date: Oct. 1961. 50,000 sq. ft. (C).
Cambridge — Titan Transformer Co.: transformers. In oper. 15,000 sq. ft. (B).
Chicopee Falls — Ornamental Iron Shop Inc.: steel & iron fabrication. Oper. date: early 1962. 15,000 sq. ft. (B).
Dalton — General Electric Co.: ordnance eng. In oper. 26,000 sq. ft. (B).
Fitchburg — Gotham Industries: plastic prod'ts. Plans announced. 100,000 sq. ft. (D).
New Bedford — Dryelite Corp.: plastics. In oper. 25,000 sq. ft. (B).
Norwood — Marrud Inc.: cosmetics. Oper. date: Oct. 1961. 70,000 sq. ft. (B).
Oxford — Stanton Blanket Co.: blankets. Oper. date: Nov. 1961. 95,000 sq. ft. (C).
Palmer — Vachon Paper Co.: paper prod'ts. Oper. date: July 1961. 60,000 sq. ft. (B).
Southbridge — Bay State Electronics Corp.: electronics. Oper. date: Nov. 1961. 45,000 sq. ft. (B).
Springfield — Countess York Ltd.: bedding prod'ts. In oper. 50,000 sq. ft. (C).
Turners Falls — Judd Wire Mfg. Co.: wire mfrs. Oper. date: Oct. 1961. 20,000 sq. ft. $100,000 (B).
West Bridgewater — Imperial Woodworking Co.: wood prod'ts. Oper. date: Sept. 1961. 15,000 sq. ft. (B).
Westfield — Camfour Inc.: sporting goods. Oper. date: early 1962. 30,000 sq. ft. (B).
Woburn — McKesson & Robbins Inc.: drug; distr. Plans announced. 45,000 sq. ft. $500,000. (B).

MICHIGAN

Albion — Gale Mfg. Co., Alumicast Div., Robt. B. Abbott, Pres.: aluminum castings. In oper. 30,000 sq. ft. (D).
Adrian — Harvey Aluminum Co., S. Keith Linden, V. Pres.: aluminum extrusions. Plans announced. 812,280 sq. ft. (E).
Rochester — Rochester Aerosol Corp., Robt. Willianganz, Pres.: hair sprays & insecticides. Plans announced. 35,000 sq. ft. (B).

MINNESOTA

Bloomington — Donaldson Co., Frank Donaldson, Pres.; Interstate 35 W. & 94th St.: oil-bath & dry air cleaners & mufflers; hq., res. Plans announced. 15-acre site. 48,400 sq. ft. $750,000.
Rosemount — Brockway Glass Co., L. F. Robertson, V. Pres., Hwy. 218: flint glass containers. In oper. 242,000 sq. ft. $4.5 million. (C).

MISSISSIPPI

Coffeeville — Normandie Mills Inc., Gregory Quick, Offl.: lingerie. In oper. 55,000 sq. ft. (exist. bldg.) $360,000. (B).

MISSOURI

Carthage — General Irrigation Co., Richard E. Diggs, Owner, 210 River St.: irrigation equip. Oper. date: Summer 1961. 10,000 sq. ft. (B).
Jackson — Kroger Co.: egg procng. Oper. date: Fall 1961. $1 million.
Joplin — Strobe Mfg. Co., Harry Rosenburg, Co-owner: precision tool parts. In oper. 30,000 sq. ft. (B).
Kansas City — Wilcox Electric Co., 1400 Chestnut St.: res. & eng. Oper. date: Fall 1961. 42,000 sq. ft. $750,000.
Kirkwood — Jobbers Mfg. & Distributing Co., H. Torrance, Pres., 10855 Manchester Rd.: seat covers. In oper. 10,000 sq. ft. (B).

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NAME_____ TITLE_____

COMPANY_____

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_____

NEW PLANTS

Lebanon — M. F. A. Fertilizer Plant: fertilizer. Oper. date: Summer 1961. 10,000 sq. ft.
New London — Mark Twain Boat Co.: plastic runabout boats. In oper. 10,000 sq. ft. (B).
Ozard — Lakeland Potteries: dinnerware & novel items. Oper. date: Aug. 1961. 8,000 sq. ft. (B).
St. Louis — Acme Paper Co., 14,000 Macklind Ave.: paper prod'ts. In oper. 60,000 sq. ft.
St. Louis — Oberjuerga Rubber Co., 5425 Manchester Rd.: rubber prod'ts. In oper. 20,000 sq. ft. $100,000.
Springfield — Holsum Bakeries Inc.: bakery prod'ts. Plans announced. $1.5 million.
Springfield — Kraft Foods Inc.: cheese. Plans announced. 90,000 sq. ft.
Springfield — National Guard, U. S. Army: maintenance depot. Oper. date: Spring 1962. (C).

MONTANA

No Plants Reported.

NEBRASKA

Omaha — Weyerhaeuser Co.: shipping containers. Plans in prog. 8-acre site. $million-plus. (C).

NEVADA

No Plants Reported.

NEW HAMPSHIRE

No Plants Reported.

NEW JERSEY

Highstown — National Lead Co., Jos. A. Martino, Pres.: non-ferrous metals, paint & pigments, etc.; res. & dev. Under constr. Compl. date: mid-1962. 250-acre site. 87,000 sq. ft. $Multi-million.
Parsippany — Industrial Timer Corp., L. L. Neidenberg, Exec. V. Pres.: special-purpose control devices & systems; res. & mfg. Under constr. Oper. date: Fall 1961. 14.3-acre site. 50,000 sq. ft.

NEW MEXICO

No Plants Reported.

NEW YORK

Amityville — Dumont Lamp Co.: lamps. (exist. bldg.). (B).
Amityville — Functional Display Inc.: trade show displays. Oper. date: July 1961. 15,000 sq. ft.
Ardsley — Interelectronics Corp.: electronics. In oper. 16,000 sq. ft. $500,000.
Bronx — Valtronic Corp., 120 E. 144 St. & 375 Walton Ave.: formica medical & dental prod'ts. In oper. 21,000 sq. ft. & 10,000 sq. ft. (exist. bldgs.).
Brooklyn — Felton Chemical Co., 599 Johnson Ave.: food flavors. In oper. 12,000 sq. ft.
Brooklyn — Fogel Mfg. Corp., 50 - 62 Sanford St.: metal stampings. In oper. 20,000 sq. ft. (Exist. bldg.).
Brooklyn — Charles Pfizer & Co. Inc., 602-28 Flushing Ave.: pharmaceuticals. Oper. date: Spring 1962. 140,000 sq. ft. $1.5 million.
Brooklyn — Universal Brush Corp., 109 S. 5th St.: Paint brushes, varnishes. In oper. (exist. bldg.) (B).
Buffalo — Co-operative GLF Exchange Inc.: animal feeds. Constr. date: Spring 1961. 13,800 sq. ft.
College Point, L. I. — Cervenka, Steven & Son Inc.: steel fabricators. Constr. date: Summer 1961. 10,000 sq. ft.
Corona — Elliot Mfg. Corp.: machine parts. In oper. 16,000 sq. ft.
Fishkill — Chemical Rubber Products Inc., Rte. 9, South. Oper. date: Fall 1961.
Frankfort — Stanray Corp.: aluminum hwy. bridges. In oper. 57,000 sq. ft. (exist. bldg.) $50,000 equip. (B).
Garden City — Hughes-Treitler Mfg. Corp.: precision sheet metal prod'ts. Under constr. 34,000 sq. ft. (C).
Garden City — Minitronics Inc.: Miniature assemblies & components. In oper. 15,000 sq. ft.

Granville — Telescope Folding Furniture Co.: wood & metal furn. In oper. 40,000 sq. ft. $100,000.
Green Island — Zak Machine Works Inc.: special-purpose mach'y. Oper. date: Aug. 1961. 32,000 sq. ft. $300,000.
Greensport — Textile By-Products Corp.: printed laminated felt. Oper. date: July 1961. 13,000 sq. ft. $100,000 equip. $130,000 bldg.
Hicksville — Alsco of Long Island Inc.: aluminum storm windows & doors. In oper. 12,500 sq. ft.
Hicksville — Skyway Container Corp.: corrugated boxes. In oper. 40,000 sq. ft. (B).
Huntington — Filtors Inc.: subminiature relays. Oper. date: Fall 1961. 50,000 sq. ft. $125,000 equip. $800,000 bldg. (D).
Huntington Station — Arcs Industries Inc.: electronic components. In oper. 22,500 sq. ft. (exist. bldg.) (B).
Huntington Station — Fae Instruments Corp.: jigs & dies. 10,000 sq. ft. (exist. bldg.) (A).
Jamaica — John Krauss Inc.: pork prod'ts.; procsng. In oper. 10,000 sq. ft. (exist. bldg.)
Jamestown — Products Machine Co., Ring Punch & Die Div.: dies & tool room equip. 40-acre site. 25,000 sq. ft.
Long Island City — Paramount Displays Inc.: adv. displays. In oper. 12,500 sq. ft. (exist. bldg.) (A).
Mount Vernon — Algene Sportswear Mfg. Co.: women's sportswear. Compl. date: Dec. 1961. 70,000 sq. ft. (D).
Mount Vernon — DeElectronics Inc.: electronic components. In oper. 10,000 sq. ft.
Newburgh — Coral Metal Mfg. Co.: metal machine custom shop. Compl. 20,000 sq. ft. (exist. bldg.) (B).
Newburgh — Poughkeepsie Iron & Metal Co. Inc.: structural steel fabricators. In oper. 15,400 sq. ft. (exist. bldg.) $10,000. (A).
New Rochelle — Litton Industries Inc. (Standard Components Corp., subs.): electronic equip. $600,000.
New York — Beecher Bros., 27 W. 23 St.: luggage & leather goods. 22,000 sq. ft.
New York — Stylebuilt Accessories Inc., 64 W. 23 St.: giftware. Oper. date: July 1961. 26,000 sq. ft. (exist. bldg).
North Argyle — Brunswick Corp. (Sheridan Catheter & Instrument Corp., subs.): patented tubes & catheters. Compl. 14,000 sq. ft.
North Tonawanda — St. Mary Mfg. Corp.: dies. Compl. 15,000 sq. ft. (exist. bldg.) (B).
Oceanside — Steelsmith Metal Products Corp.: hollow metal doors & frames. Compl. 10,000 sq. ft. (exist. bldg.) (B).
Ogdensbrug — Pepsi-Cola Ogdensbrug Bottlers: bottling plant. Under constr. 12,000 sq. ft. $125,000 (A).
Ossining — Mearl Corp.: res. In oper. 13,700 sq. ft. (B).
Patchogue — Josh Products Co. Inc.: sewing notions, hair goods. In oper. 22,500 sq. ft. (exist. bldg.) (C).
Patchogue — U. S. Laminating Corp.: laminating textile fabrics. In oper. 17,500 sq. ft. (exist. bldg.).
Poughkeepsie — Daystrom Inc., Industrial Guage Div.: cable. Compl. 20,000 sq. ft. (exist. bldg.).
Rye —General Foods Corp.: ofc. Oper. date: Fall 1961. 68,000 sq. ft. (D).
Sayville — Dulon Mfg. Co.: insulating & plastic coating mater. Compl. 10,000 sq. ft.
Staten Island — U. S. Gypsum Co.: whse. Oper. date: Oct. 1961. 38,200 sq. ft. $100,000 equip., $400,000 bldg.
Syosset — Budd Stanley Co. Inc.: microwave components. In oper. 40,000 sq. ft. (exist. bldg.) (C).
Syosset — Lafayette Radio Electronics Corp.: hi-fi radio components & equip. Oper. date: Fall 1961. 16,000 sq. ft. (D).
Ulster — New York Trap Rock Corp.: lightweight aggregate. Oper. date: Apr. 1962. $22 million. (B).
Whitestone, L. I. — Fuller Tool Co. Inc.: tools. In oper. 31,000 sq. ft. (exist. bldg.) (B).
Whitestone, L. I. — Regent-Sheffield: cutlery. In oper. 21,750 sq. ft. (exist. bldg.) (B).
Woodside — American Machine Products Inc.: pumps & filters. In oper. 5,000 sq. ft. (exist. bldg.) (B).
Yonkers — Fairbanks Morse & Co.: engines, scales & mach'y. Oper. date: July 1961. 120,000 sq. ft. (exist. bldg.).
Yonkers — Phelps Dodge Copper Products Co.: electrical coaxial cable connectors. Compl. 10,000 sq. ft.

NORTH CAROLINA

Charlotte — Gold Seal Mfg. Co., Inc.: seamless ladies' hosiery, knit fabrics.
Charlotte — Metals Treating Engineering Co.: heat treating, plating, etc. Over 10,000 sq. ft. (A).
Charlotte — Transit Mix Concrete Corp.: ready-mixed concrete. Over $100,000. (A).
Clinton — County Wide Sewing Co., Julius DeMay, Mgr., R. H. Lewis, Pres.: apparel. Plans in prog. (B).
Fairmont — Fairmont Knitting Mills Inc.: Ban-Lon knit shirts. Plans announced. 50,000 sq. ft. (exist. bldg.) $150,000 equip. (D).
Hendersonville — Jerri-Lu Mfg. Co.: women's apparel. (B).
Morrisville — Unit Structures Inc.: structural glued laminated timber. (B).
Pilot Mountain — Armtex Inc.: circular knit fabric. (B).
Reidsville — Golden Belt Mfg. Co.: printing cigarette labels & cartons. (B).
Rocky Mount — Dunlee Inc., N. Church St.: plastic baby pants. Plans announced. (Exist. bldg.) (B).

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NORTH DAKOTA

No Plants Reported.

OHIO

Alliance — Alliance Machine Co., Owen Merrick Lewis, Pres., 1049 S. Mahoning Ave.: heavy overhead cranes. Oper. date: Nov. 1961. 30,000 sq. ft. $350,000. (B).

Canton — Diebold Inc., Raymond Koontz, Pres., 818 Mulberry Rd., S. E.: safes & bank vaults. Oper. date: Oct. 1961. 15,000 sq. ft. $250,000.

Cleveland — Jos. Schlitz Brewing Co., P. D. Nugent, Clvlnd. Mgr., 2141 Broadway Ave.: beverages. Plans announced. 25,000 sq. ft. $250,000.

Dayton — Dayton Etched Products Corp., Chas. E. Bossi, Pres., 1520 Stanley Ave.: metal trim, name-plated & decorative. Oper. date: Aug. 1961. 45,000 sq. ft. $240,000.

Dayton — Sheffield Corp., Louis Polk, Brd. Chm., 721 Springfield St.: automatic gaging & segregating machines. 57,000 sq. ft. $1.25 million.

Dayton — Sucher Packing Co., Hyman Feinstein, Gen. Mgr., 400 N. Western: meat & meat by-products. Oper. date: Sept. 1961. 45,000 sq. ft. (B).

Delta — Little Dude Mfg. Co., Inc. 80,000 sq. ft. (exist. bldg.) (C).

East Canton — Stark Ceramics Inc., Church St.: structural glazed facing tiles. 160,400 sq. ft. $1.35 million.

Elyria — Carmen Wine Co., Geo. S. Jacoby, Owner., 333 E. Bridge St.: whse. Oper. date: Oct. 1961. 12,500 sq. ft. $100,000. (A).

Elyria — Lear Inc. (Lear-Romec Div.), K. Robert Hahn, exec. V. Pres., S. Abbe Rd.: commercial pumps & motors. Oper. date: Oct. 1961. 35,000 sq. ft. $1 million.

Liberty Center — Unit-Plastics Inc., Jos. Tillman III, Pres., P. O. Box 147: polyester reinforced with glass. In oper. 20,000 sq. ft. $100,000. (A).

Medina — Bliss & Laughlin Inc., F. J. Robins, Pres., W. Smith Rd.: cold finished steel bars. Oper. date: Oct. 1961. 75,000 sq. ft. $2 million. (B).

Portsmouth—Oxo Chemical Co., (corrected as Ohio from 6/61 issue); Chemical Processing. Under Const. $10 million. 586 acre site.

Springdale, Lodge & Shipley Ind. Park— Lord Baltimore Press (Div. Internatl. Paper Co.), Leonard Dalsemer, Pres., Circle Freeway & Princeton Rd.: Paper cartons for cosmetics, soaps, cigarettes, drugs, food mixes. 150,000 sq. ft. (C).

Stow — American Elumin Co. (AMELCO), Sven Eric Persson, Offl., Commerce Dr.: aluminum commercial & industrial window assemblies. 50,000 sq. ft. $650,000. (C).

Vandalia — Sprague Electric Co., Robt. Swift, Mgr., National Rd.: RFI filters, wave filters. Oper. date: Sept. 1961. 10,000 sq. ft. $150,000. (B).

Worthington — Bell Sound Systems Inc. (Div. of T.R.W.), Huntley Rd.: hi-fi amplifiers, tuners, tape recorders. Oper. date: July 1961. 118,500 sq. ft. $2 million.

OKLAHOMA

Oklahoma City, Steelman Ind. Dist. — Lloyd A. Fry Roofing Co., Lloyd A. Fry Jr., Pres.: asphalt roofing mater. Oper. date: Nov. 1961. 100,000 sq. ft. $1 million. (B).

OREGON

Portland — Daily Journal of Commerce, N. W. 24th Ave. & Vaughn St.: prntng. Under constr. 26,000 sq. ft. $300,000.

Portland — Losli Sheet Metal Works, 5805 S. W. Hood: mfg. & ofc. Plans announced. 14,000 sq. ft. $75,000.

Portland — White Stag Mfg. Co., S. E. 52nd Ave. & Harney Dr.: apparel; hq. Under constr. Compl. date: 1962. 50,000 sq. ft. $850,000.

PENNSYLVANIA

Canton — Canford Mfg. Corp.: plastic closures & lids. Plans announced. $300,000. (A).

Conshohocken — American Components Inc.: electronic components. Oper. date: Sept. 1961. $100,000. (C).

Dresler — Allied Concrete & Supply Corp., Upper Dublin Twp.: ready-mixed concrete. Oper. date: Spring 1962. $100,000.

Milroy — Fisher Electronics Inc.: electronics. Oper. date: Sept. 1961. 58,000 sq. ft. (D).

Philadelphia — Deruss Machine Products Co., Michael F. Russo, Pres., Linden & Torresdale Ave.: precision parts & components for missiles & military tanks. Oper. date: July 15, 1961. 28,000 sq. ft. $250,000. (B).

PUERTO RICO

Carolina — Astronic Corp., H. C. Westcott, Pres.: magnetic recording tape. Plans announced. 6,514 sq. ft. $60,000. (B).

Carolina — Caribe Circuit Breakers Co., Inc., Martin Zinsmeyer, Pres.: electrical circuit breakers. In oper. 18,000 sq. ft. $300,000. (C).

Carolina — Parke Davis & Co., Orlando Castegnet, Mgr.: injectable prod'ts. Plans announced. 45,000 sq. ft. $982,000. (C).

Ciales — Caribe Metals Inc., Jos. Green, Pres.: zinc & brass strips for terrazzo floors. Oper. date: Nov. 1961. 6,000 sq. ft. $40,000. (B).

Guayama — Americana Mfg. Co., Inc, Max Kellman, Treas.: girdles. In oper. 11,867 sq. ft. $50,000. (C).

Hato Rey — Autrico Corp., Jose A. Figueroa, Pres.: reconstructed automatic transmission. Plans announced. 3,500 sq. ft. $40,000. (C).

Vega Alta — Caribbean Electronics Inc., A. J. Cole, Pres.: electron guns for cathode ray tubes. Plans announced. 11,500 sq. ft. $75,000. (B).

RHODE ISLAND

Cranston — Advanced Micro-Electronics Inc., Frank P. Pennucci, Pres.: transistors, diodes, etc. Oper. date: Late 1961. 20,000 sq. ft. $150,000. (C).

Providence — Cities Service Oil Co.: liquid asphalt distr. Plans in prog. $500,000.

Providence, Huntington Expressway Ind. Prk. — Glass-Tite Industries Inc., Ralph Paptio, Pres., Branch Ave.: electronic components. Oper. date: late 1962. 11.3-acre site. 100,000 sq. ft. $700,000. (C).

SOUTH CAROLINA

Belton — Alpha Mfg. Co., Belton-Honea Path Hwy.: metal prod'ts. Under constr. 25-acre site. 82,000 sq. ft. (C).

Edgefield — Edgefield Steel Cabinet Co., U. S. Hwy 25: steel cabinets. Compl. date: Aug. 1961. 60,000 sq. ft. $275,000. (C).

SOUTH DAKOTA

No Plants Reported.

TENNESSEE

Camden — Adams Mfg. Co., Ronald Adams, Pres.: fiberglas boats, swimming pools, etc. In oper. 20,700 sq. ft. (B).

Memphis — Fish Meal Co.: high protein fish meal for poultry feed. Plans announced. 12-acre site. 60,000 sq. ft. $500,000. (A).

Morristown — Morristown Mfg. Co.: apparel. In oper. (B).

TEXAS

Arlington — National Cash Register Co. (Correction: not Grand Prairie per ID, 5/61).

Garland — Telsco Industries of Dallas, M. E. Snoddy, Pres.: sprinkler systems, threadless pipe fittings & plastic pipe; mfg., ofc. Under constr. 8-acre site. 36,000 sq. ft. (30,000 mfg., 4,000 res.).

Orange — DuPont Co.: high-pressure polyethylene & vinyl resident. Plans announced. Compl. date: 3rd. quarter, 1962. (B).

Shiner — Hale Specialty Co., Howard H. Person, Owner: memorial & Christmas wreaths, artificial flowers. 15,000 sq. ft. (reloc.) (B).

Sunray — Shamrock Oil & Gas Corp.: amonia. Plans announced. $2.5 million.

Sweetwater — Ridley Packing Co., Dave Ridley, Mgr.: meat; pkg., procsng. (acquisn. of Mid-West Packing Co.). (B).

Tyler — Kordite Co. (Div. Natl. Distillers & Chem. Corp.), Howard J. Samuels, Pres.: Polyethylene & polypropylene films for pkg., agric. & ind'l. use. Plans announced. 17-acre site. 43,000 sq. ft. $1 million. (C).

UTAH

No Plants Reported.

VERMONT

No Plants Reported.

VIRGINIA

Leesburg — Barber & Ross, S. Ross Lipscomb, Pres.: pre-cut homes. Plans announced. 68,000 sq. ft. $450,000. (B).

WASHINGTON

Colville — Colville Meats Inc.: custom killing. Plans in prog. 7,000 sq. ft. $133,000. (A).

Everett — McKesson & Robbins Inc. of Seattle, U. S. Hwy. 99 at Beverly Dr.: whlsle. drug whse. Plans in prog. 32,000 sq. ft.

Othello — Jas. Henry Packing Co.; meat pkg. Plans in prog. $1.2 million. (C).

Spokane, Spokane Ind. Prk. — Bearn & Co. Inc.: pine & hardwood molding. Under constr. (B).

Tacoma — Dominion Tar & Chemical Co., Ltd., (Montreal): lime. Plans in prog. $2 million. (B).

WEST VIRGINIA

No Plants Reported.

WISCONSIN

No Plants Reported.

WYOMING

Glenrock — American Humates Inc., J. C. Karcher, Pres., 2328 Fidelity Union Tower, Dallas, Tex.: chemical fertilizer. Oper. date: 1962. $1 million. (B).

Laramie — Laramie Wool Processing & Warehousing Corp., Jim Burton, Offl.: wool scouring & storage. In oper. (B).

CANADA

ALBERTA

Lethbridge — Canadian Dressed Meats Ltd.: meat prod'ts. Oper. date: Aug. 1961. $310,000. (B).

Medicine Hat — Alberta Western Beef Co., Ltd.: meat prod'ts. Oper. date: Oct. 1961. $1.5 million. (B).

Red Deer — Red Deer Packers Ltd.: meat prod'ts. Oper. date: Sept. 1961. $1 million.

Windfall — Pan American Petroleum Corp., Ltd.: gas procsng.: liquid petroleum gases & sulphur. Oper. date: Dec. 1961. $30 million. (B).

BRITISH COLUMBIA

Abbotsford — Willows Poultry Farm Ltd.: poultry procsng. Oper. date: Aug. 1961. (B).

Port Moody — Andres Wines Ltd.: wines. Oper. date: Sept.-Oct. 1961. $400,000. (B).

Trail — Consolidated Mining & Smelting Co., Ltd.: liquid chlorine, caustic soda, potassium hydroxide (caustic soda to Castlegar plant, potassium hydroxide for Trail plant). $2.6 million. (A).

Vancouver — O'Keefe Brewing Co. (B. C.) Ltd.: beer. $4 million. (B).

MANITOBA

Carberry — J. R. Simplot Canada Ltd., J. R. Simplot, Pres.: potatoes, dry mashed, dehydrated, frozen patties, etc. Oper. date: Oct. 1961. 144,000 sq. ft. $2.5 million. (D).

Carberry — Strammit Corp. Ltd., J. S. Remington, Pres.: strawboard. In oper. 72,000 sq. ft. $180,000. (A).

NEW BRUNSWICK

No Plants Reported.

NEW PLANTS

NEWFOUNDLAND

No Plants Reported.

NOVA SCOTIA

No Plants Reported.

ONTARIO

Calgary, Meridian Ind. Estate — Canada Packers Ltd., W. F. MacLehn, Pres., Toronto: livestock feed concentrates. Oper. date: Nov. 1961. 15,000 sq. ft. $500,000.

PRINCE EDWARD ISLAND

No Plants Reported.

QUEBEC

No Plants Reported.

SASKATCHEWAN

Moose Jaw — Styrene Industries Ltd., A. A. Meyers, Pres.: plastic bldg. mater. Plans announced. Over $100,000. (B).

INTERNATIONAL

France — Societe Calaisienne des Pates a Papier: soda pulp from hardwood. Plans in prog. $10 million.

Germany, Fed. Rep. of -, (Kelsterbach) — Caltex Oil Germany: oil refinery. Plans announced. $50 million.

India — Dharamsi Morarji Chemical Co.: aluminum sulphate. Plans in prog. $2.1 million.

India — Dharamsi Morarji Chemical Co.: sulphuric acid. Plans in prog. $500,000.

Italy — Eli Lilly & Co., Burton E. Beck, Pres. of Eli Lilly International Corp.: pharmaceuticals. Compl. date: end 1961. $1.3 million.

Japan (Kawasaki) — Karonite Chemical Co., Ltd., formed by: Calif. Chem. Co. (subs. Standard Oil Co. of Calif.), 45% interest; Kao Soap Co. Ltd., 45% int.; Nomura Jimusho Inc., 10% int.: oronite lubricating oil additives & alkylphenols; mfg. & sls. Oper. date: 1962. $2 million.

Japan (Takeyama) — Fuji Electric Co. & other Japanese industries: industrial radiation research cntr. In oper. $1.5 million.

Japan (Tokyo) — Toshiba Central Research Laboratory of the Tokyo Shibaura Electric Co.: electrical & electronic ind'y.: res. cntr. In oper. $8.8 million. (E).

Japan (Yamanashi City) — Snaraku Distillers Co.: distillery complex. Under constr. $2.77 million.

Malaya (Petaling Jaya) — Alcan Malayan Aluminum Co., Ltd. (Subs. Aluminum Ltd. of Canada): aluminum rolling mill. Plans announced. $1.3 million.

Mexico — Petroleos Mexicanos (jointly owned: DuPont & Pemex): tetraethyl lead. Plans announced. $8 million.

Netherlands (Botlek) — Esso Nederland N. V.: petrochemicals. Plans announced. $18 million.

Pakistan (Sangu River) — East Pakistan Water & Power Dev. Auth.: hydroelectric plant (30,000 kw). Compl. date: 1966. $21 million.

Peru (Lima) — Sociedad Anonima Peruana Carlo Erba: drugs lab. Plans announced. $720,000.

Philippines: National Power Corp.: Marikina Dam (68,000 kw). Constr. date: July 1961. $54 million.

Saudi Arabia (Jidda & Dammam) — Ministry of Commerce: grain silos. Plans in prog. $6 million.

Spain — Gillette International: razor blade factory, Plans in prog. $3 million.

Turkey — Goodyear International: tires. Plans in prog. $10 million.

USSR — All-Soviet Technology & Machine Import Corp.: paper plant. Compl. date: Oct. 1962. $8 million purch. from mfr.: Kasaoka Mach'y. Mfg. Co., Tokyo. Exported by: Toyo menka Co., Osaka.

Venezuela — Eli Lilly & Co., Burton E. Beck, Pres. of Eli Lilly International Corp.: pharmaceuticals. Constr. date: Summer 1961. $1.3 million.

I. D. CALENDAR

JANUARY

ID January Issue features Real Estate Brokers Reference Study.

FEBRUARY

ID February Issue features Electric Utilities Reference Study.

MARCH

ID March Issue features the Ports Reference Study and the American Industrial Development Council Reference Study.

APRIL

ID April Issue features Industrial Parks Reference Study.

American Ind'l Dev't Council plans 1962 annual convention at Cleveland, Ohio.

MAY

ID May Issue features the Blue Book of Southern Progress Reference Study and the Trucking Companies Reference Study.

JUNE

ID June Issue features Gas Utilities Reference Study.

Engineering Economy Division of American Society for Engineering Education 1962 Annual Meeting planned at Colorado Springs, Colo.

JULY

ID July Issue features New England Reference Study and Railroad Reference Study.

26th-28th: American Management Ass'n, "Planning—Forecasting & Planning in the Defense Industries" (Workshop No. 2125-81). Colgate University, Hamilton, N. Y. Reservations: AMA, Inc., 1515 Broadway, Times Square, New York 36, N. Y.

31st-Aug. 2nd: AMA, "Forecasting — Advance Business Forecasting" (Workshop No. 2131-92). AMA Academy, Saranac Lake, N. Y. Reservations as above.

31st-Aug. 4th: AMA, "Planning — Advanced Long-Range Planning Workshop" (Workshop No. 2102-95). AMA Academy, Saranac Lake, N. Y. Reservations as above.

31st-Aug. 4th: AMA, "Facility Engineering — Organization & Management of the Facility Engineering Function" (Workshop No. 4183-81). Colgate University, Hamilton, N. Y. Reservations as above.

AUGUST

ID August Issue features Canadian Reference Study and State Agencies Reference Study.

21st-25th: AMA, "Total Planning — Planning to Meet Corporate Growth" (Orientation No. 2226-92). AMA Academy, Saranac Lake, N. Y. Reservations as above.

Utah plans an Economic Development Conference at Salt Lake City. Contact: W. C. Palfreyman, Director, Utah Comte. of Ind'l & Employ't Planning, 174 Social Hall Ave., Salt Lake City.

SEPTEMBER

ID September Issue features Financial Institutions Reference Study.

11th-15th: AMA, "Real Estate — Fundamentals of Corporate Real Estate Management" (Orientation No. 2228-91). AMA Academy, Saranac Lake, N. Y. Reservations as above.

18th-20th: AMA, "Corporate Planning" (Workshop No. 2113-06). LaSalle Hotel, Chicago. Reservations as above.

18th-22nd: International Bank for Reconstruction and Development, International Monetary Fund, International Finance Corporation, International Development Association: Annual Meetings of Boards of Governors. Vienna, Austria. Contact: Office of International Conferences, Department of State, Washington 25, D. C.

11th-16th: The International Industrial Conference, sponsored by Stanford Research Institute & National Industrial Conference Board, convenes in San Francisco for five days.

Virginia and the Idaho-Eastern Oregon Industrial Development Council plan Autumn development conferences. Watch future issues for further details.

OCTOBER

ID October Issue features the Annual Site Selection Handbook.

2nd-4th: Canadian Chamber of Commerce Annual Conference, Halifax, Nova Scotia.

5th-6th: Minnesota's I.D. Conference, Rochester, Minn.

9th-11th: AMA, "Planning — Forecasting & Planning in the Defense Industries (Workshop No. 2125-05). Hotel Astor, New York City. Reservations as above.

23rd-24th: Missouri I.D. Conference, Governor Hotel, Jefferson City, Mo.

29th-31st: Southern Industrial Development Council Conference, Tampa Terrace Hotel, Tampa, Florida.

NOVEMBER

ID November Issue features Air Transport Reference Study.

Tennessee plans ID Conference. Watch future issues for further details.

Society of Industrial Realtors plans Fall Convention at Miami, Fla.

DECEMBER

ID December Issue features the Gulf-Caribbean Area Reference Study.

5th-7th: Building Research Institute Fall Conference (Div. of Engineering & Industrial Research). Shoreham Hotel, Washington, D. C. Contact above organization at 2101 Constitution Ave., Washington 25, D. C.

DIRECTED BY
Richard Edmonds 1882-1930
Frank Gould 1930-1943
William Beury .. 1943-1955
McKinley Conway 1956

MANUFACTURERS RECORD
(IN REVIEW)

"What Enriches Any Region Enriches The Nation"

JULY, 1887 (AS ABSTRACTED MORE THAN 70 YEARS LATER) BALTIMORE, MD.

Take Care of What You Have

Southern cities and towns that have money to spend in industrial development can make better use of their means in aiding existing establishments than in reaching out after new concerns. A thousand dollars used to enable a factory to extend its business will usually produce a greater result and benefit the community to a greater extent than three times as much money expended in building up an entirely new plant. There are comparatively few manufacturing establishments in this country that are run to their full capacity, the reason in a large proportion of cases being the lack of sufficient capital. This is particularly true of the industries in the South, and the fault lies largely with those who induced the location of the manufacturing establishments as aids to town development. There has been, and still is, an unfortunate ambition among town development companies in the South to secure large and varied assortments of industries with little regard to their financial strength and stability. Many of those who have secured the establishment of new industries in Southern towns or the transplanting of old ones have considered their object accomplished when the wheels begin to turn and the goods go on the market. Then they start on a hunt for another new concern.

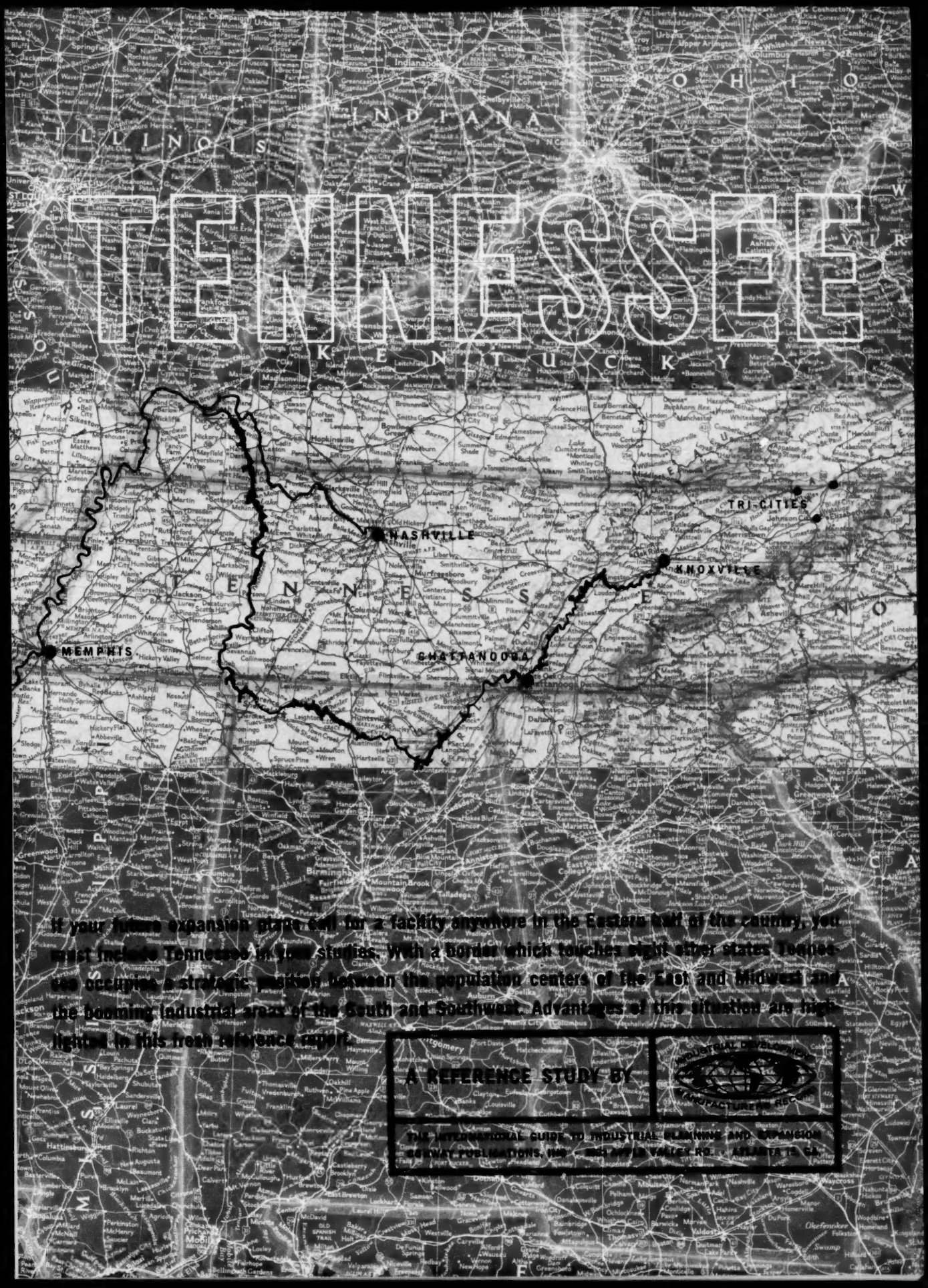
We have in mind several painful illustrations of this mistaken policy in the shape of towns that have a number of well-built and well-equipped factories, large enough to support a good working population, but all standing idle for lack of the lubrication without which their whee's will not turn — money. All the capital of the manufacturers, all the funds of the townspeople, expended in establishing the largest possible number of factories, and nothing left for operating capital. The show of industry has been made in a list of numerous establishments, but it is a show only. What credit to a town is there in a lot of idle mills, or a large number with capital and business sufficient only for a few? Mere numbers count for nothing save to befool innocent investors in town lots who are reliant upon what they see in print only. It is vastly more to the credit and prosperity of any community to have one well-managed factory, with capital sufficient for its needs and all the business its capacity will admit, than to have ten manufacturing establishments running on part time and handicapped by insufficient capital.

In promoting the industrial development of any town the establishment of an industry suited to the location is the first step of importance. Then, instead of an endeavor to secure another industry, the next step is to see that the one first established has capital enough to conduct its business. If money is needed by this concern it is far wiser to put development funds there than in a second establishment, with a chance that both will be crippled by lack of means. It is just at this point that so many promising towns have been stripped of all their possibilities, because men have failed to realize that it is better to be sure of what you have than to risk it for the uncertainties of something you have not . . .

A word of advise, then, to those who are seeking new industries for Southern towns. Before you offer a dollar to any new enterprise see to it that the industries already existing in your locality have all the capital they can use to advantage. If they need money to extend their business do not think of any new enterprises until this want is supplied. Remember that the mere numerical strength of your industries counts for absolutely nothing in honest business, but that the volume of their business and their financial stability amount to everything. One good, strong manufacturing concern is of more benefit to a community than a dozen weaklings. When you have an industry take care of it.

Safety of Electric Cars

There is a question which has been asked by almost everyone who has seen or ridden on an electric car — that is, is there any danger of getting a shock? Those who are familiar with electric car construction are often amused at this question, and probably the best answer which can be given to it is that of the conductor of an electric car, who, on being asked by a nervous passenger whether she would get a shock if her foot touched an iron bolt in the floor, was told that it was not possible unless she put the other foot on the trolley wire. Electric cars are quite safe, and unless a connection be made between the trolley wire and some metal work leading to the ground no shock is possible, and even then the current generally in use is rarely sufficient to cause death.



If your future expansion plans call for a facility anywhere in the Eastern half of the country, you must include Tennessee in your studies. With a border which touches eight other states Tennessee occupies a strategic position between the population centers of the East and Midwest and the booming industrial areas of the South and Southwest. Advantages of this situation are highlighted in this fresh reference report.

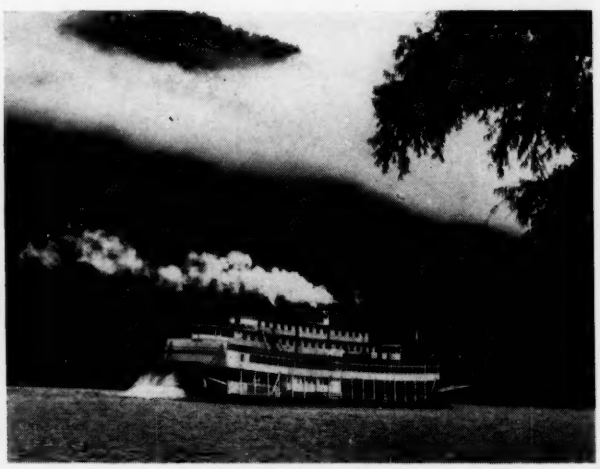
A REFERENCE STUDY BY

INDUSTRIAL DEVELOPMENT MANUFACTURERS RECORD

THE INTERNATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION
SEAWAY PUBLICATIONS, INC. · 803 APPLE VALLEY RD. · ATLANTA 19, GA.

TENNESSEE:

ID's editor found that Governor Buford Ellington is well informed on development matters and that he answered questions on this subect adeptly and forthrightly. Tennessee's growth was explained by the Governor this way: "I believe one of the big things that is influencing business to look at Tennessee is that the State is financially sound and is being operated in a businesslike manner."



Variety is a keynote in Tennessee and the traditional and the functional both have their niche in this diversified State. This picturesque riverboat, plying one of Tennessee's many rivers, is emblematic of the rich and colorful history of the State.

Looped entrances and exits of this modern freeway form a unique pattern which illustrates the kind of planning which has been put into both the intrastate and interstate highway systems here. (opposite)

Most promotion groups are prone to overstress the "diversification" of their area. But this is difficult in Tennesese where variety is fact, not fancy. Topography ranges from the rugged Smokies in the East to the wide Mississippi basin in the West; hundreds of miles from the sea, the state is traversed by important waterways; new industries run the spectrum from aluminum and glass to fibers and petrochemicals; population and growth is divided among five metropolitan areas and a hundred important communities.

THREE STATES IN ONE!

Tennessee is at least three states — each of them full of surprises!

That's the first conclusion of ID staff members who have researched the state from border to border during recent weeks. Covering almost every county, often using our single-engine Cessna to get into small airstrips, ID personnel were continually impressed with the variety of development situations they encountered.

While there are common denominators, there are clear distinctions which make it necessary to take a really good look at Tennessee to appreciate it. In the Memphis area, for example, there are important heavy industrial units attracted by the abundance of process water and river transport. Near Knoxville there is the great Oak Ridge nuclear complex. Nashville is a governmental and market center. Chattanooga probably has the greatest variety of industrial activities. The Tri-Cities of Kingsport, Johnson City and Bristol have scored some of the biggest recent successes in industrial development. And many of the smaller cities, such as Lebanon and Murfreesboro, are shining examples of recent progress.

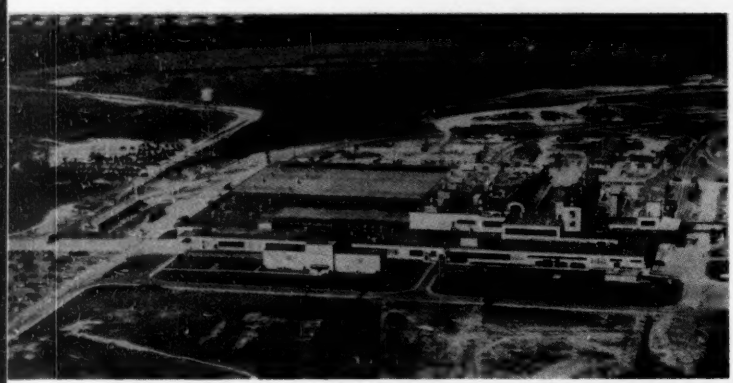
Clearly, Tennessee has a definite appeal for a wide range of expanding industries. A parade of site-seeking firms is proof of the pudding.

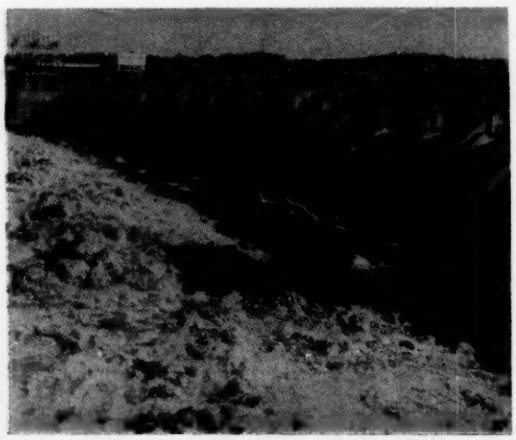
$354 Million In New Plants

Tennessee's industrial expansion during the biennium of 1959-60 depicts to some extent the growth the State has enjoyed since moving rapidly out of an agriculturally-based economy.

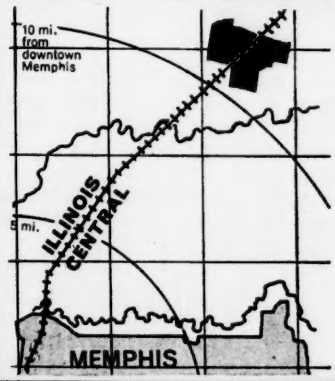
During this two-year period the total investment committed to new plants and expansions exceeded $354 million. The fact that the 718 industrial units involved were located in 119 different cities and towns means that Tennessee is growing on a widespread basis, not just one or two areas.

The largest new plant to locate in the State during the past two years is the American-Saint Gobain Corporation's new plate glass manufacturing facility in Kingsport. This subsidiary of Compagnie de Saint-Bogain of France is constructing a 23-acre building on a 700-acre site at a cost of more than $40 million.





Industry, water and power in Tennessee are substantial — and growing — as this pictorial panorama suggests. In the left column, from top to bottom, are four industrial plants which illustrate the diversity of the size and type of the State's manufacturing facilities: Eastman-Kodak at Kingsport; E. I. duPont at Chattanooga; General Electric at Murfreesboro; Brown Shoe at Trenton. In the right column water and power are depicted in these photos showing the Pickwick Landing Dam in West Tennessee and the Kingston Steam Plant on Watts Bear Lake near Kingston. The Kingston plant is the country's largest steam station.



a site worth seeing in **MEMPHIS**

767 acres

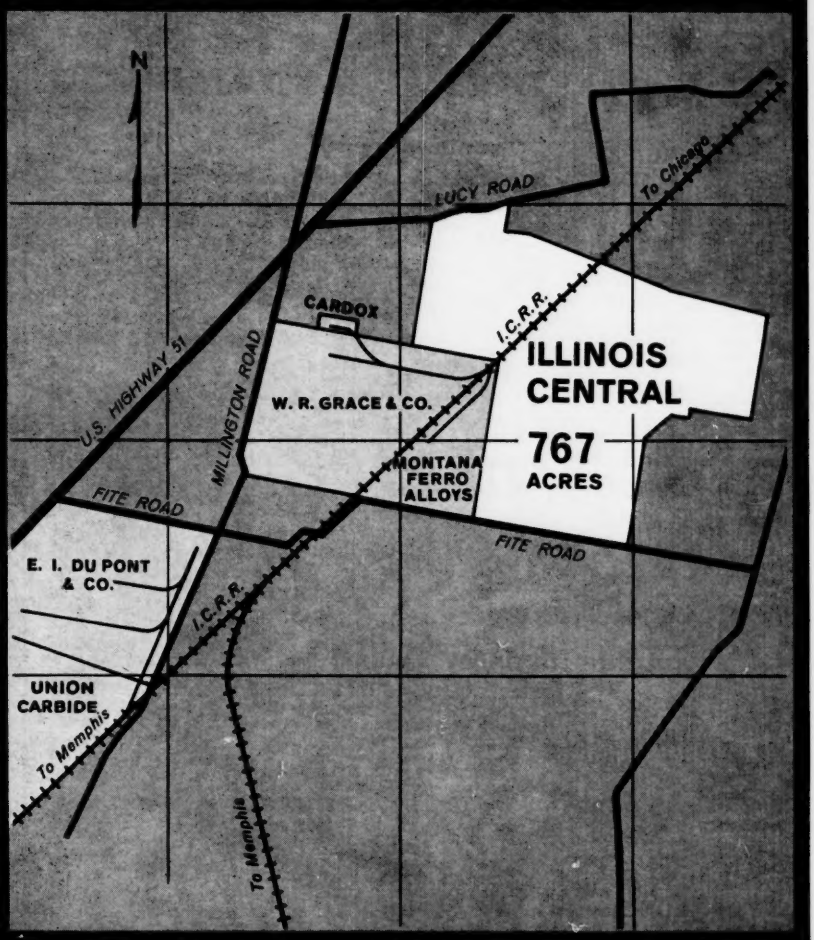
of Illinois Central property located north of Memphis at Woodstock, midway between Chicago and New Orleans . . . a fast growing industrial community with such fine neighbors as E. I. du Pont Company, the Grace Chemical Company, Union Carbide, Montana Ferro-alloys and Cardox Company.

. . . 11 miles from downtown Memphis

. . . traversed by the main line of the Illinois Central Railroad and adjacent to U. S. Highway 51

. . . water, sewage, gas and electric power all available

. . . for sale or lease in whole or part



A confidential discussion with our Director of Industrial Development is sure to save you time in selecting the best plant site to fit your needs. Contact J. S. Frost, 135 E. 11th Place, Chicago 5. Telephone WAbash 2-4811.

ILLINOIS CENTRAL RAILROAD

Main Line of Mid-America

TENNESSEE ECONOMIC DATA

(From 1961 Blue Book of Southern Progress)

Business Volume

INDUSTRY	1960 Active Estab. (000)	1960 Persons Engaged (000)	1960 Output Value $ Mil.	1954 Output Value $ Mil.	1947 Output Value $ Mil.	1939 Output Value $ Mil.
Miscellaneous Rural	.3	5	$ 20	$ 12	$ 7	$ 3
Farming	200.9	255	647	573	627	186
Mining	.7	7	123	83	92	22
Raw Materials	**201.9**	**267**	**$ 790**	**$ 668**	**$ 726**	**$ 211**
Construction	7.1	65	715	695	217	104
Manufacturing	4.5	321	5,781	3,948	2,367	728
Processing	**11.6**	**386**	**$ 6,496**	**$ 4,643**	**$ 2,584**	**$ 832**
Utilities	3.5	58	769	530	327	130
Finance	5.7	42	1,161	708	446	121
Supplementary	**9.2**	**100**	**$ 1,930**	**$ 1,238**	**$ 773**	**$ 251**
Wholesale Trade	4.9	63	5,545	4,492	3,105	840
Retail Trade	36.5	180	3,509	2,759	1,883	606
Service Trade	22.8	135	973	870	510	197
Distributive	**64.2**	**378**	**$ 10,027**	**$ 8,121**	**$ 5,498**	**$ 1,643**
Tennessee Enterprise	**286.9**	**1,131**	**$ 19,243**	**$ 14,670**	**$ 9,581**	**$ 2,937**

Manufacturing

INDUSTRY	1960 Active Estab. (000)	1960 Persons Engaged (000)	1960 Output Value $ Mil.	1954 Output Value $ Mil.	1947 Output Value $ Mil.	1939 Output Value $ Mil.
Food	.8	35	$ 992	$ 775	$ 624	$ 140
Tobacco	*	1	31	41	22	17
Textiles	.2	32	467	352	192	83
Apparel	.2	43	404	206	142	49
Pulp-Paper	.1	9	301	178	91	20
Printing-Publishing	.5	16	156	100	70	26
Chemicals	.2	45	1,210	894	316	124
Petroleum-Coal	*	1	33	23	3	2
Rubber	*	5	114	80	51	8
Leather	.1	16	150	107	116	22
Nondurables	**2.1**	**203**	**$ 3,858**	**$ 2,756**	**$ 1,627**	**$ 491**
Lumber	1.2	18	161	153	139	43
Furniture	.2	16	169	93	82	25
Stone, etc.	.2	13	196	88	51	20
Primary Metals	.1	14	389	272	253	92
Fabricated Metals	.3	19	336	209	56	19
Machinery	.2	8	265	128	50	11
Electrical Machinery	*	14	167	63	13	1
Transport Equipment	*	6	120	92	79	21
Instruments	*	4	37	20	5	2
Miscellaneous Mfg.	.2	6	83	74	12	3
Durables	**2.4**	**118**	**$ 1,923**	**$ 1,192**	**$ 740**	**$ 237**
Tennessee Manufacturing	**4.5**	**321**	**$ 5,781**	**$ 3,948**	**$ 2,367**	**$ 728**

*Too small to tabulate.

Urban Business Volume—$ Million

Urban Area City & County	1960 All Business	1960 Other Than Manufacturing	1960 Manufacturing	1954 Manufacturing	1947 Manufacturing	1939 Manufacturing
Memphis	$ 5,374	$ 4,191	$ 1,183	$ 948	$ 571	$ 169
Nashville	2,766	2,042	724	446	289	122
Knoxville*	2,483	1,598	885	416	227	83
Chattanooga†	2,089	1,235	854	554	285	87
Bristol-Kingsport	1,075	719	356	291	192	51
Johnson City	290	231	59	37	29	9
Jackson	248	191	57	36	36	8
Clarksville	179	129	50	36	19	4
Total Urban	**$14,504**	**$10,336**	**$ 4,168**	**$ 2,764**	**$ 1,648**	**$ 533**
Non-Urban	**$ 4,739**	**$ 3,126**	**$ 1,613**	**$ 1,184**	**$ 719**	**$ 195**
Tennessee	**$19 243**	**$13.462**	**$ 5,781**	**$ 3,948**	**$ 2,367**	**$ 728**

*Three counties. †Does not include suburbs in Georgia.

Urban Income and Expenditure

Urban Area City & County	1950 Population (000)	1960 Population (000)	1960 Area Income $ Mil.	1960 Per Capita Income	1960 Area Expenditure $ Mil.	1960 Per Capita Expenditure
Memphis	480	628	$ 1,696	$ 2,700	$ 1,332	$ 2,121
Nashville	320	400	891	2,227	740	1,850
Knoxville†	336	370	840	2,270	694	1,876
Chattanooga*	207	239	781	3,268	585	2,448
Bristol-Kingsport	75	115	383	3,330	286	2,487
Johnson City	60	65	89	1,369	88	1,354
Jackson	60	61	81	1,328	81	1,328
Clarksville	44	56	75	1,339	75	1,339
Total Urban	**1,582**	**1,934**	**$ 4,736**	**$ 2,449**	**$ 3,881**	**$ 2,007**
Non-Urban	**1,701**	**1,634**	**$ 1,521**	**$ 931**	**$ 1,919**	**$ 1,174**
Tennessee	**3,283**	**3,568**	**$ 6,257**	**$ 1,754**	**$ 5,800**	**$ 1,626**

†Three counties.
*Does not include suburbs in Georgia.

The facility, which will be one of the most modern plate glass plants in the country, was sought by at least eight other states in a spirited competition.

A British firm recently announced plans to construct a zinc ore processing mill near Jefferson City. Tri-State, Inc., has carried on a diamond drilling program in this area and the company has indicated that reserves have proved sufficient to justify the mine development and mill construction. Total investment will be approximately $6 million.

Genesco, Inc., the world's largest apparel and footwear manufacturer, has revealed plans to build a headquarters office building, a warehouse and three new plants in Nashville at the City's airport. These plans call for a $15 million construction program on a 49-acre site.

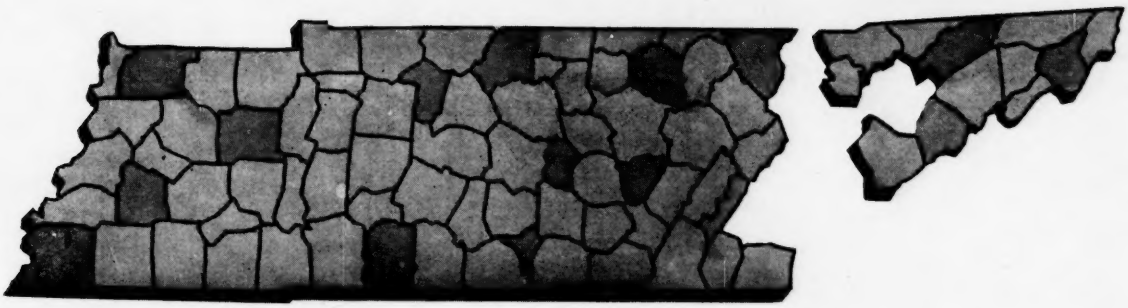
Additional indications of Tennessee's industrial attractions are two new plants in Chattanooga and Memphis. Nopco Chemical is moving into a new 84,000 square feet plant on a 17-acre tract in Chattanooga, where some 100 employees will manufacture plastic foam. And Southern Solid State Electronics recently opened a heat generator manufacturing unit employing some 75 people in Memphis.

The Tennessee Eastman Company has already expressed its confidence in the industrial attractiveness of the State with a $60-million expansion program for its Kingsport plants. Another important addition in this area is the large new plant of Kingsport Press.

Market "Hub"

This diversified state could be called the "hub" of a nine-state wheel with the spokes being formed by the bordering states, in clock-wise order: Kentucky, Virginia, North Carolina, Georgia, Alabama, Mississippi, Arkansas and Missouri. This "wheel" represents an impressive consumer market with a population of more than 30 million people. Equally important is the trend of this population; this census figure is 9.26 percent above the 1950 figure, putting the nine-state area above the national average during this period.

Tennessee itself has more than 3.5 million people, an increase of 7.4 percent during the 1950-60 dec-

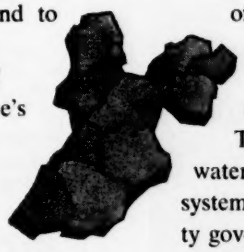


Missing Something?

We'd like to respectfully call your attention to an omission! That unsightly hole in the map of Tennessee is us—the 10 counties of the East Tennessee Industrial Council. (You'll find us intact in the middle of this page.)

We're trying to make a simple, but important point:

In considering industrial sites in the south, you're missing something important if we don't figure in your deliberations. We've banded together to forewarn you of this and to inform you about us.



The 10 counties of the ETIC pretty well encompass Tennessee's famous "Great Lakes of the South." Nestled in our picturesque hill country are a great many of the Tennessee Valley Authority lakes. They're pretty to look at, fun to fish and provide us with all sorts of recreational opportunities, but what is more important to you, they are a source for abundant electric power at low rates.

Within the ETIC area is an impressive labor supply—men and women stable in their devotion to their native home, industrious, intelligent, used to industry and industry's needs.

The region is rich in natural resources and many industries have sought us out for the raw products which are right at our back doors.

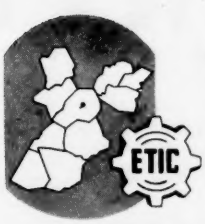
Transportation facilities are better than you'll find most places and we have an added advantage of direct water routes to the Gulf and Great Lakes.

Despite the influx of industry, our section remains principally agricultural and thousands of industrial workers own their own farms.

This makes for devotion and appreciation, for the industry is then a neighbor as well as an employer.

There's also natural gas, an abundance of water, a pleasant and level climate, good school systems, efficient and stable municipal and county governments and an attitude of helpfulness to industry which perhaps is the most important factor of all!

Don't miss something attractive and valuable to your own firm by failing to investigate East Tennessee. An inquiry to any of the organizations listed below will be expedited appreciatively and in confidence. May we hear from you soon?



East Tennessee Industrial Council

H. W. Hollingsworth, Pres.
LaFollette Development Corp.
LaFollette, Tennessee

Horace V. Wells, Secy.
Anderson County Industrial Development Commission
Clinton, Tennessee

Rathburn A. Ray
McMinn County Industrial Comm.
Athens, Tennessee

J. L. Dyer
Monroe County Industrial Comm.
Madisonville, Tennessee

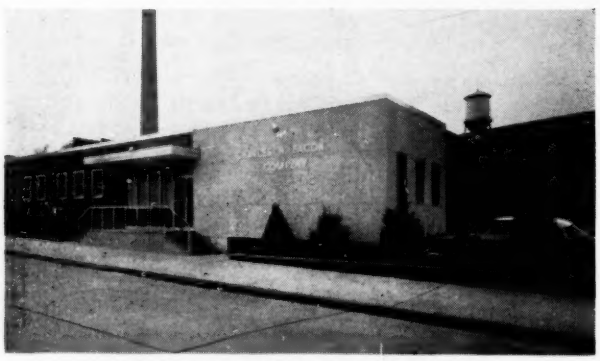
Robert Lamb, Mgr.
Blount County Chamber of Commerce
Maryville, Tennessee

R. Jack Fishman, Mgr.
Morristown Chamber of Commerce
Morristown, Tennessee

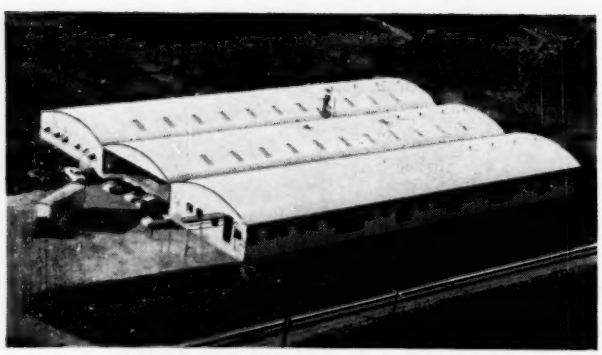
David D. Dickey, Industrial Director
Knoxville Chamber of Commerce
Knoxville, Tennessee

Union Carbide Corporation, Visking Company Division Plant, Loudon Plant

The Yale & Towne Manufacturing Company, Yale Lock & Hardware Division, Lenoir City Plant



Charles H. Bacon Co., Inc., Lenoir City Office



American Duralite Corporation, Loudon Plant

Other noteworthy Loudon County industries:

Fletcher Bros. (Meat Packers)
Lenoir Car Works (Railroad Equipment)
Don P. Smith Chair Co.
Loudon Hickory Products

Measure Us By Our Industrial Advantages:

- **Economical T.V.A. Power**
- **Virtually Unlimited Water Supply**
- **Excellent Transportation**
- **Capable Local Labor**

They're **all** yours in Loudon County — in ever-growing East Tennessee! A virtually unlimited water supply . . . a nine-foot channel for travel on the Tennessee River . . . a new interstate highway system running **both** north-south and east-west . . . excellent rail and motor transport facilities . . . a wealth of capable local labor . . . all of these make Loudon County your choice for a new plant site.

. . . and Measure Us By The Industry We Have!

Our partnership with industry is an old and significant one. In Loudon County there is a **climate** for industrial growth which can be measured in terms of satisfaction and expansion of our existing industry.

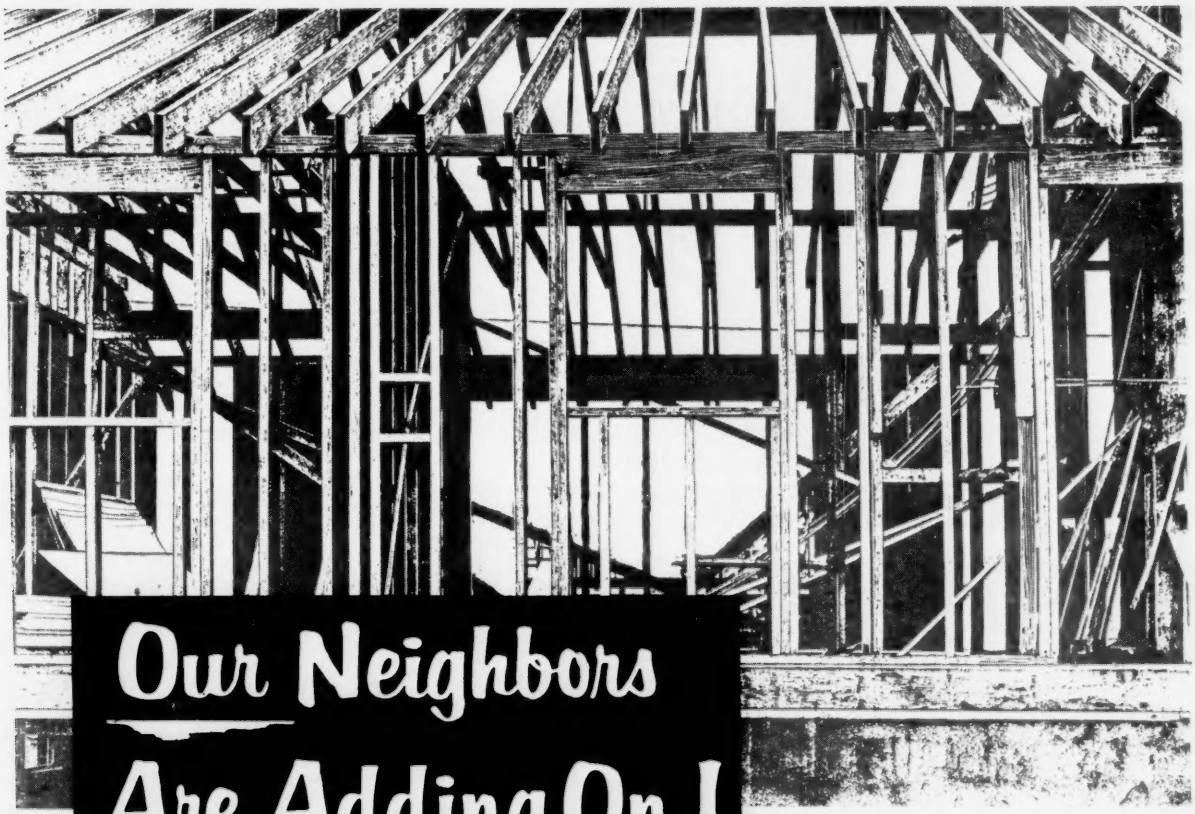
The firms at left form a part of the Loudon story . . . and there are interesting new chapters! May we tell you more about us? A simple inquiry brings workable information.

LOUDON COUNTY

TENNESSEE

Lenior City Chamber of Commerce
P. O. Box 72
Lenoir City, Tennessee

Loudon Chamber of Commerce
P. O. Box 366
Loudon, Tennessee



Our Neighbors Are Adding On!

A good way to judge a residential area is by the stability of its homeowners.

When they outgrow their residence, do they just move off to a larger one? Or, does the neighborhood compel them to stay on?

We think you can measure a community's industrial desirability by the same yardstick. And by that yardstick we're proud of Knoxville's hold on its industries.

In 1960 alone there were 21 expansions by Knoxville industry!

Why?

The heads of these industries give us different reasons—all of them important to a prospective new neighbor. Here is the consensus:

1. **LABOR** — Knoxville has some 8000 persons available in its labor force . . . workers with a record of consistent loyalty, craftsmanship and reasonable wage requirements.
2. **LOCATION**—Knoxville is in almost the exact geographic center of the eastern United States, about equidistant from St. Louis, Chicago, Detroit, Baltimore, Jacksonville, Mobile and Little Rock, all less than 600 miles away.
3. **TRANSPORTATION** — Knoxville is a junction point for five U.S. highways and will have five radials on the federal Interstate routes. It is served by two main-line railroads, five airlines, some 40 trucking firms and barge service on the Tennessee River, connecting with the Great Lakes and the Gulf of Mexico.
4. **POWER**—Low-cost electricity, natural gas and water are distributed through a single source, Knoxville Utilities Board. Coal is available from nearby Tennessee and Kentucky fields, and nine oil bulk plants are located in Knoxville.
5. **ESTABLISHED INDUSTRIAL PARK**—There are outstanding sites with room to grow available in the Pleasant Ridge Industrial District . . . convenient to down town . . . close to good residential areas, schools and recreational facilities.

During this same year, 13 new industries began operating in the Knoxville area. In fact, since Jan. 1, 1950, a grand total of 95 new industries has been established here!

We think this pretty well establishes the fact the Knoxville area has significant advantages to offer industry—new or old.

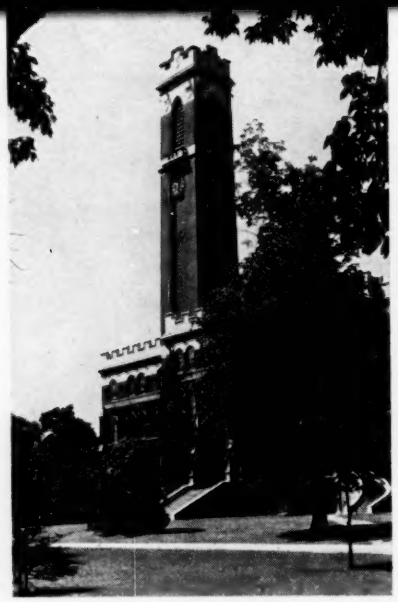
Don't you?

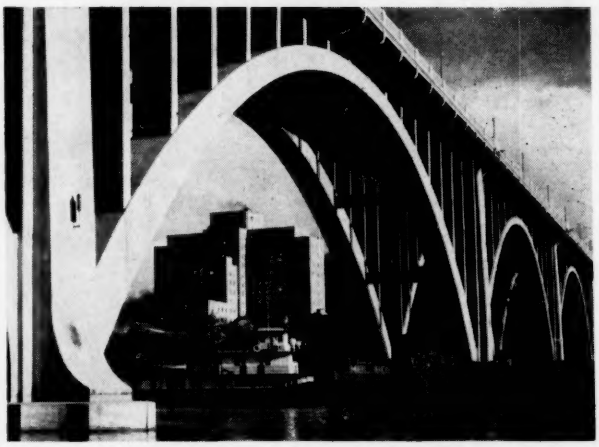
Write or call for additional facts, in complete confidence

The Chamber of Commerce

KNOXVILLE

Industrial Department 920 Gay Street, S.E. Knoxville 2, Tennessee





Tennessee offers a wide range of advantages in culture, recreation and transportation — too many to adequately cover in this space. These photos picture a small portion of these many advantages, beginning in the left column, from top to bottom, with the famed Vanderbilt University at Nashville; the Great Smoky Mountains; and Illinois Central's Johnston Yard at Memphis. On the right and in the same order are the new $2.5 million high school at Johnson City; the Henley Bridge across Fort Loudon Lake at Knoxville; and the new industrial fill in the Memphis Harbor.

ade. And the State's largest city, Memphis, is among the top 50 metropolitan areas in the country in percentage increase during the past 10 years with a 24.2 figure. As a consumer market and as a location to serve a growing regional market, Tennessee obviously offers a great attraction.

The State's industrial market is growing rapidly, too. This fact is evidenced by data from the 1961 Blue Book of Southern Progress (an annual edition of ID). The Blue Book data reveal that the value of manufacturing output in 1960 totaled more than $5.78 billion, representing a growth of some 46.4 percent since 1954 — illustrative of the market for industrial suppliers here.

Water Resources

Fortunate in having three major rivers — Mississippi, Cumberland and Tennessee — the State has been even more blessed in having efficient and effective water-regulating agencies. Chief among these, of course, is the Tennessee Valley Authority, which has built a system of dams and reservoirs on the Cumberland and Tennessee rivers and some of their larger tributaries. This action has given the State a unique and priceless source of water for industrial, municipal and recreational uses. The operations of these great water systems redistribute normal stream-flow to reduce waste and increase the availability of water in large quantities.

Large-volume water users will find numerous points of accommodation along the three major rivers and their tributaries, which presently supply many large chemical and other process industries.

Surface water is found in greatest abundance in the middle and eastern areas with ground water the chief source of supply in west Tennessee, where relatively shallow (500-1,000 feet) drilled wells commonly yield from 500,000 to 1,000,000 gallons daily.

Tennessee receives an average of 50 inches of rainfall each year, the bulk of which occurs in the winter and early spring and about 20 inches of this becomes a part of the surface or ground-water systems.

Although water is not a problem in the State, a Statewide Water Resources Study has been estab-

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Industrial Tennessee

Industrial Trends in Tennessee, Volume One—Industrial Resources of Tennessee

Migration and Industrial Development in Tennessee

New Industries in Tennessee—1959

Schedule of Mid-Week Closings of Tennessee Businesses

Tennessee . . . A Good Place to Live

14 Reasons Why Manufacturers Can Profit More in Tennessee

Corporation Laws, Domestic and Foreign, of Tennessee

Tennessee Laws of Interest to Industry, 1961

Industrial Regulation, Taxes and Licenses, Volume Five—Industrial Resources of Tennessee

Principal Taxes on Corporations in Tennessee, An Outline

Industrial Water Supply of Tennessee

Tennessee's Water Resources

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Population of All Incorporated Places in Tennessee, 1960.

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Bristol, Virginia-Tennessee, Bristol Chamber of Commerce, Bristol, Virginia, Tennessee. 60 pages

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Knoxville Chamber of Commerce, 918 Gay Street, S.W., Knoxville, Tenn.

Industrial Directory, 1961 9 pages, $1

Look Who's Here . . . 16 pages

Your Site in The Great Industrial Valley of East Tennessee, 1958. 100 pages

Johnson City Industrial Commission, P. O. Box 1061, Johnson City, Tennessee.

Report From Industry in Upper East Tennessee. 16 pages

Resources Handbook of Pertinent Economic Information for Industry. 45 pages

Area Plant Sites and Available Buildings for Industry. 60 pages

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EAGER-BEAVER TENNESSEEANS

Wherever you go in Tennessee, in large towns or small, you'll find an alert and aggressive group of local officials ready to provide information and services. Altogether, there are more than 250 development organizations active in the state.

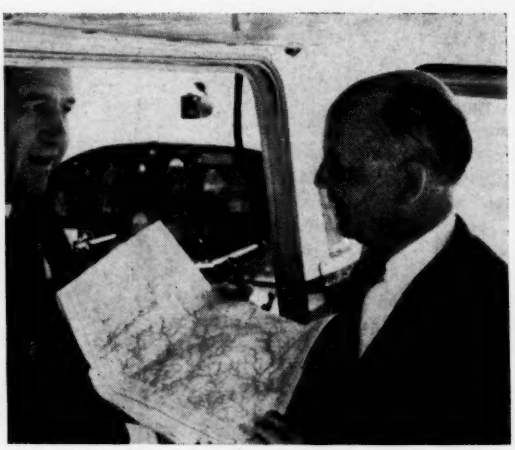
Former Lebanon Mayor Bill Baird (left) heads the board of the state development agency. George Benedict (right) is the agency's executive head.

In Chattanooga, Committee of 100 official Jim Hunt (left) and Chamber of Commerce manager Clem Moseley (center) give a visitor a rundown on new industrial park site.

Jack Fletcher, a realtor, heads the industrial committee in Knoxville.

East Tennessee developers Dave Dickey (left) and Charles Herd (right) give ID's editor a planeside description of opportunities.

Tom Lupton, a private developer, is a potent factor in Chattanooga, has brought in such plants as Vulcan Iron Works.



Tri-Cities of Bristol, Kingsport, and Johnson City cooperate on growth plans. Here Kingsport's A. B. Coleman (left) chats with Johnson City's C. R. Strauss under wing of ID airplane.

MR. INDUSTRIALIST...

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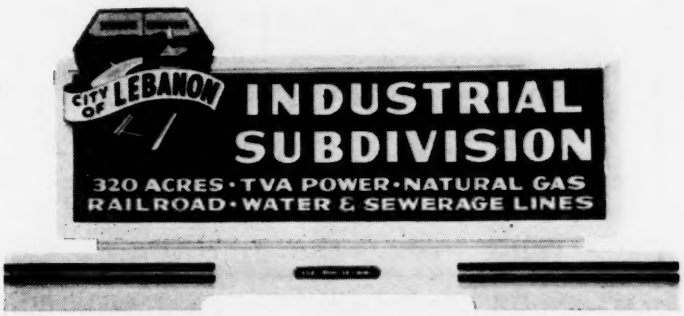

WRITE OR PHONE:

LEBANON & WILSON COUNTY CHAMBER OF COMMERCE

208 N. CUMBERLAND STREET

LEBANON, TENNESSEE

PHONE HIckory 4-5503

ID's Analysis Of Growth Opportunities

Based on the editorial appraisal of Tennessee presented here, ID's staff believes the most significant factors influencing new growth in Tennessee include:

1. Strategic location between the East-Midwest and the South-Southwest.
2. Aggressive community improvement and development programs at the local and state levels.
3. Low-cost electric energy from TVA hydro and steam plants.
4. Excellent water resources and low-cost water transport.
5. Reservoir of labor which is productive and independent.

Namedroppers Guide to Major Tennessee Industry

Food
Armour and Co.
Borden Co.
Brown-Forman Distillery
Cargill, Inc.
Carnation Co.
Central Soya Co.
Cudahy Packing Co.
Jack Daniels Distillery
Foremost Dairies
General Foods
Hormel and Co.
Kellogg Co.
Kraft Foods Co.
National Dairy Products
National Distillers Products Co.
Pet Milk
Pillsbury Mills
Quaker Oats
Ralston-Purina
J. Hungerford Smith Co.
Stokley-Van Camp
Swift and Co.
Tobacco
U. S. Tobacco Co.
American Tobacco Co.
Textiles
Palm Beach Co.
Bemis Bros. Bag Co.
Burlington Ind.
Kroehler Mfg. Co.
Roselon Yarns
Roxbury Carpet Co.
Van Raalte Co.
Apparel
Salant and Salant, Inc.
Boss Mfg. Co.
Ely & Walker Dry Goods
Hat Corp. of America
Jonathan Logan, Inc.
Levi Strauss & Co.
Petroleum and Coal
Lehon Co.
Lumber
E. L. Bruce Co.
Furniture
Heywood-Wakefield Co.
Lane Co.
Magnavox
Paper
Alton Box Board Co.
Bowaters Southern Paper Corp.
Container Corp. of America
Kimberly-Clark Corp.
Mead Corp.
St. Joe Paper and Box Co.
Printing and Publishing
Kingsport Press
Publications Corp.
Chemical
Abbott Laboratories
Air Products Co.
Air Reduction Co.
American Cyanamid Co.
Atlas Powder Co.
Beaunit Mills
Belding-Heminway Co.
Cardox Corp.
Cutter Labs.
Davison Chemical Corp.
E. I. duPont
Grace Chemical Co.
Hooker Electrochemical Co.
International Minerals and Chemical
Lavino Chemical Co.
Linde Air Products Co.
Monsanto Chemical Co.
National Cylinder Gas Co.
Nopco Chemical
Olin Mathison Chemical Corp.
Plough Inc.
Purex Corp.
Stanley Works Stauffer Chemical Co.
Stauffer Chemical Co.
Tennessee Eastman Co.
Union Carbide
Victor Chemical Co.
Virginia-Carolina Chemical Corp.
Vitro Corp.
J. R. Watkins Co.
Rubber
Boston Woven Hose and Rubber Co.
Duplan Corp.
Firestone Tire and Rubber Co.
Gates Rubber Co.
B. F. Goodrich
Precision Rubber Products Corp.
U. S. Rubber Co.
Leather
Acme Boot Mfg. Co.
Brown Shoe Co.
Genesco
Hartmann Luggage Co.
International Shoe Co.
Trostel Industries
Stone, Clay and Glass
Minnesota Mining and Manufacturing Co.
American-St. Gobain Corp.
Chattanooga Glass
Corning Glass Co.
Ford Motor Co.
General Portland Cement Co.
Marquette Cement Co.
Penn-Dixie Cement
Shulton Corp.
Metals
Aluminum Company of America
Ferro Corp.
Foote Mineral Co.
National Lead Co.
Tennessee Copper Co.
Fabricated Metals
Aladdin Industries
American Can Co.
Continental Piston Ring
Crane Co.
Heil-Quaker Co.
Holly Carburetor Co.
Laclede Steel Co.
Maves Bros. Tool Mfg.
National Casket Co.
Ross Gear and Tool Co.
Strom Steel Ball Co.
Trane Co.
U. S. Pipe and Foundry Co.
U. S. Steel Co.
Yale and Towne Mfg. Co.
Machinery-non electrical
Combustion Engineering Co.
International Harvester
Koehring Co.
Powermatic Machine Co.
Rotary Lift Co.
Vulcan Iron Works
Electrical Machinery
Century Electric Co.
Dominion Electric Co.
Gould-National Batteries
Knapp Monarch Co.
John Oster Mfg. Co.
Ray-O-Vac Co.
Robbins and Myers, Inc.
Western Electric Co.
Transportation Equip.
Detroit Gasket Co.
American Brake Shoe Co.
Borg-Warner Corp.
Chris Craft Corp.
Fruehauf Trailer Co.
General Motors
Murray Ohio Mfg.
Wizard Boats
Instruments
American Enka Corp.
Avco Corp.
Lux Clock Mfg. Co.
Raytheon Mfg. Co.
Sperry-Rand Corp.

lished by the Tennessee Division of Water Resources to research some 11 aspects of water and its uses to prepare for future needs. Too, the Division of Water Resources works closely with the TVA and the Corps of Engineers in studying various facets of water supply.

A splendid example of the planning being made for water development is the Corps of Engineers' "Plan for the Cumberland River." This comprehensive program affecting primarily the upper middle area around Nashville involves some 13 projects, some of which are multipurpose. Five have been completed and one other is under construction with the others in the planning stages. This is an overall program to provide a high quality of water supply, low-cost hydroelectric power, flood protection and an excellent avenue of water transportation. When completed, this program obviously will change the development of this area dramatically.

Low-Cost Power

Electric power is supplied throughout most of the State by the Tennessee Valley Authority, which has an installed capacity of almost 10 million kilowatts. This federal agency has a vast system of dams and steam plants and a 7,500-mile transmission network. Private and public utility companies are supplied primarily by TVA.

Low-cost electric power is available in all parts of the State. Generally, the cost of TVA power is some 30-45 percent lower than the national average. A table of TVA electric power costs is presented elsewhere in this report.

Water and coal are the primary sources of energy for the TVA at present, but the agency is now completing an experimental gas-cooled nuclear reactor at Oak Ridge to investigate the feasibility of this new source of energy.

The Oak Ridge story has been detailed in great length in many places and there are many ideas undergoing extensive research now. For a more complete report, see ID's Reference Study on Oak Ridge in the December, 1960 issue.

All of the principal industrial fuels are available in Tennessee — coal, fuel oil and natural gas. The State's 4,400 square miles of coal

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Low-Cost TVA Power

Some typical bills according to consumption level in the state would look something like this:

Demand KW	Consumption KWH	Basic	Inter-mediate	Lowest
150	60,000	$ 500	$ 450	$ 415
500	200,000	1,310	1,260	1,225
1,000	400,000	2,410	2,360	2,325

fields have some 20 mineable seams producing bituminous coals. Industrial users of fuel oils and other petroleum products benefit from the low-cost transportation by pipeline and river-barge from Gulf Coast areas.

There are nine pipeline companies transmitting natural gas from Texas and Louisiana and all but one of which serve or propose to serve Tennessee cities. The companies operating pipelines in the State are: **West Tennessee** — Texas Gas Transmission Corporation, Alabama Tennessee Natural Gas Company, Trunkline Gas Company and American-Louisiana Pipe Line Company; **Middle Tennessee** — Tennessee Gas Transmission Company, East Tennessee Natural Gas Company, Tennessee Natural Gas Lines Company, Texas Eastern Gas Transmission Corporation and Gulf Interstate Gas Company; and **East Tennessee** — East Tennessee Natural Gas Company.

Water is only one of many resources in diversified Tennessee. Because of its east-west extension, the State embraces a wide range of mineral deposits. There are about 30 economically-important minerals in the State and, in recent years, the production of the top ten minerals and mineral products have each exceeded $1 million in value of output.

The leading mineral product is coal. The Tennessee coal fields are part of the Appalachian coal deposits and embrace a total area of some 4,400 square miles. All of these deposits are the bituminous type. Cement is a leading mineral product and there are manufacturers of Portland cement in six counties.

Tennessee is the only major copper-producing state in the South and is the South's leader in its by-product, sulphuric acid. One of the eastern United States' largest producers of zinc ore, Tennessee is also the second largest producer of phosphate in the country. Abundant sources of limestone are available in almost any area of the State. Manganese, barite and iron ores are other minerals mined in limited quantities.

Tennessee has never been a **major** producer of oil and gas, but some of the first petroleum produced in the United States was discovered by pioneers drilling for water at Trent. Oil and gas production is very limited and comes from shallow wells in the Highland Rim of Middle Tennessee and the Cumberland Plateau.

One of the South's largest sources of timber, Tennessee's land area is about half timberland. In 1960 the State had more than 23 billion board-feet of saw timber reserves, with about 12 billion of this in hardwood.

Agriculture still accounts for more than 25 percent of the business volume here. The value of farm output in 1960 was $647 million with principal cash crops of cotton, tobacco and soybeans.

Four Transport Systems

Rail, highway, air and water transportation throughout the State is more than adequate and recent advances in these systems have increased the utility and speed factors. Now, more than 50 percent of the nation's population can be reached within 24 hours shipping time.

Fourteen rail lines serve Tennessee with seven having direct routes to all or part of 25 states. Railroads serving the State are: Central of Georgia; Rock Island; Clinchfield; Gulf, Mobile & Ohio; Illinois Central; Louisville & Nashville; Missouri Pacific; Oneida & Western; Frisco; Cotton Belt; Southern; Tennessee, Alabama & Georgia; Tennessee Central; and Yazoo & Mississippi Valley.

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One of the nation's principal aircrossways, Tennessee is served by ten commercial airlines through five major airports, all designated as Class III or better. The five urban areas served regularly by commercial airlines are Chattanooga, Knoxville, Memphis, Nashville and Tri-Cities (the Bristol-Johnson City-Kingsport cities).

Operating on more than 70,000 miles of State highways the 728 certificated motor freight carriers in Tennessee provide prompt service to major cities all across the country. Major U. S. Highways in the State are: 80, east-west; 81, northeast; 55, north-south; 65, north-south; 75, north-south; and 41, north-south. More than one-thousand miles of Interstate Highways are planned and much of this is in the construction stage.

A major advantage to bulk shippers is the 807 miles of navigable waterways which provide a shipping avenue for nearly 22 million tons of freight annually. Waterways are navigable all the way from Knoxville in East Tennessee to the Gulf of Mexico. A series of locks enable barge traffic to travel freely along the Cumberland and Tennessee Rivers past the TVA dams. As mentioned, an extensive program of waterway development is underway which will facilitate barge traffic in middle and eastern parts of the State.

Labor Data

One of Tennessee's most attractive advantages is the large available labor force, which is 99.5 percent native-born. The adaptability of Tennessee's workers to new skills and trades was demonstrated during World War II, when thousands of employees were trained in the manufacture of aircraft, optical supplies and precision instruments.

Of course there are large pools of labor available in the five major urban areas in the State, but a surprising number of workers can be found in the rural areas. The main reason for this is the growing distance workers will commute. For example, 21,000 persons recently were registered in a 30-mile radius of a city of only 5,500.

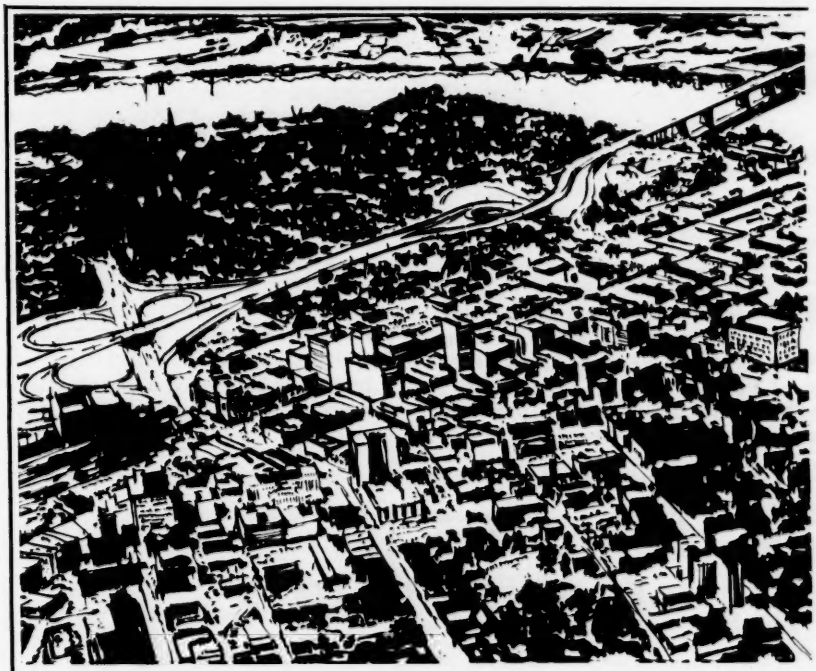
Wage rates are comparable to the general average paid by industry throughout the South. Hourly rates in the urban areas are similar to Chattanooga's standards. A survey of average hourly earnings for production workers in the Chattanooga Metropolitan Area as of January 1, 1961, revealed these findings:

Industry	Average Hourly Earnings
All manufacturing	$1.93
Textiles	1.51
Knitting mills	1.37
Household furniture	1.42
Paper products	1.96
Chemicals	2.35
Stone, clay and glass	1.98
Iron and steel foundries	2.35
Fabricated metal products	2.47
Non-electrical machinery	1.95

"Right-to-Work" legislation was passed in Tennessee in 1947 and has been in force continuously since that time.

The Governor Knows Development Facts

As a matter of official policy and as a matter of simple fact, the state



tennessee (the Chattanooga area in particular) has everything!

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SERVING THIS AREA FROM NINE BANKING OFFICES

government in Tennessee is enthusiastically committed to a program of encouraging industry. ID's editor and his aides received a warm welcome in the office of Governor Buford Ellington, who answered a barrage of questions adeptly and forthrightly.

"I believe one of the big things that is influencing business to look at Tennessee is that the State is financially sound and is being operated in a businesslike manner," the Governor said, adding, "I don't believe any state is in a better financial position."

As further evidence of a favorable business climate, Governor Ellington cited numerous instances in which he had personally participated in development efforts. Asked about legislation, he mentioned a number of bills which have been enacted to accelerate industrial growth.

Of special interest are the industrial bond acts under which a number of industrial plants have been financed. Also significant is the recent act of the Legislature cutting the use tax on machinery used in manufacturing from three percent to one percent. The latter bill alone has resulted in savings of thousands of dollars for new industries as well as those already located in the state and engaged in expansion programs.

Tennesseans are also proud of their AAA-1 bond rating, and the absence of personal income taxes and state property taxes. The annual corporation report tax is one half of one percent on gross receipts from interstate business. The state sales tax rate is three percent.

The day-to-day promotion of industrial development in Tennessee comes under the Industrial Development Division of the Department of Conservation and Commerce, headed by veteran industrial developer, George L. Benedict, Jr. One of the functions of his group is to perform certain staff work in connection with the screening of projects to be financed under the three bond plans. Specifically, these plans each afford certain opportunities:

Plan Number I authorizes Tennessee cities and counties to issue revenue bonds to finance the construction or purchase industrial buildings for lease to private industry. These buildings are leased on terms which provide for retirement of the principal and payment of the interest. The bond issue must receive the approval of a ¾ majority of those voting in the referendum. The interest on the bonds cannot exceed six per cent.

These bonds cannot constitute a financial obligation on the cities or counties but they have a lien on the rentals received from the buildings. The bonds, incidentally, are exempt from state, county and municipal taxation except inheritance, transfer and estate taxes. This plan is authorized by the Industrial Bond Act of 1951.

Plan Number II authorizes cities and counties to establish a public Industrial Development Corporation with power to acquire and dispose of properties and buildings to private industrial concerns. The corporation may issue bonds payable from the revenues received from the leasing or sale of industrial property.

These industrial development corporations may also pledge the full-faith and credit of the city or county with the approval of a ¾ majority of those voting in a public referendum, and a certificate of Public Purpose and Necessity issued by the State Building Finance Committee as described in Plan III.

Plan Number III authorizes cities and counties to issue full-faith and credit bonds for the purpose of financing the purchase or construction of industrial buildings for lease to private industrial concerns. The rental income from industrial buildings must be pledged to the full retirement of the bonds. The bonds may not be issued for a term of more than 40 years or have an interest rate in excess of six per cent, and must be approved by a ¾ majority of those voting in the public referendum.

In order to issue these bonds, the city or county must receive a certificate of Public Purpose and Necessity from the State Building Finance Committee. This committee serves as a screening board and determines that sufficient resources and labor are available and that the total amount of the indebtedness will not exceed ten percent of the assessed valuation of the city or county.

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- Trained Labor. Century of industrialization has provided pool of experienced workers in light metals, electronics, textiles, woodworking, leather goods, heavy machinery.
- You'll like the Twin Cities, others do. Raytheon Manufacturing Company, Sperry-Farragut, Monroe Calculating Machinery Company, Burlington Industries among many who enjoy benefits of healthy industrial climate.

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The committee also determines that the project has a reasonable chance of success, will provide the proper economic development to employment and will not become a burden on the taxpayers of the particular area involved.

Tennessee Communities — Competitive and Constructive

When you narrow your focus from the whole state of Tennessee to individual cities and communities, your site survey becomes even more of a challenge. You discover right away that no one city or area dominates the scene, as is true in many states.

Almost every section of Tennessee can claim some distinction and all have certain drawbacks. This balance makes for the keenest sort of competition for your new facility.

Latest statistics show no less than four Tennessee cities ranking in the top ten population-wise in the Southeast. These are Memphis, Nashville, Knoxville, and Chattanooga. The next major center is the Tri-Cities group of Kingsport, Bristol, and Johnson City. Following them are Jackson and Clarksville.

Each of these areas could well be the subjects of ID editorial surveys on their own and it is impossible to cover them adequately in a roundup on the entire state. A few highlights will indicate, however, the depth and scope of progressive action to be found:

Chattanooga is a long-established industrial city now swept by a new wave of development being spearheaded by a new generation of community builders. Improvement projects totaling some $100 million are now underway. These include major urban renewal projects, a new bridge across the Tennessee River, impressive highway and thruway construction, and large sewer mains.

The most casual glance at the city gives proof of forward motion. The new $8 million Provident Life building gives a modern skyline. Street construction is as extensive as that seen anywhere for a city of this size. One new urban project involves relocating the L&N railroad downtown and building a new station.

A recent study by Hammer and Company stressed opportunities in

What unique advantages does Chattanooga have for industry?

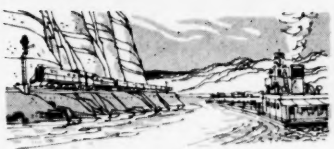
1) Chattanooga . . . the South's first industrial city and its most diversified

This means:

a) Specialized service industries.
b) Well stocked mill supply houses.
c) Labor with almost any desired skill in practically every craft.
d) Professional services geared to industry's needs.
e) Specialized banking services for commerce and industry.

INDUSTRIAL
Chattanooga
TENNESSEE

2) Chattanooga is at the foot hills of the Appalachians where the Tennessee River breaks out of the mountains



a) Natural crossroads of the South and from NE to SW and from MIDWEST to SE. Speedy, low cost distribution especially of heavy or bulky commodities.
b) Year 'round low cost water transport, nine foot minimum channel.
c) Unlimited pure industrial water assured by a chain of dams upstream.
d) Ample, low cost power . . . gas, coal, oil, electric.

3) A delightful place to live

a) Your family can find its ideal home site . . . mountain, hill, lake or stream.
b) A climate warmer in winter and cooler in summer than in many of the areas much further north. Average temperature 60.6°.
c) Outdoor living at its best. Hunting, fishing, water sports . . . and over night by car to the seacoast.
d) A cultural, medical and established educational center.

• Complete site research and location services, including freight rate studies for this Tri-State area are available at no cost and in confidence.

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NASHVILLE

the Chattanooga area for industrial activities located on the inland waterway system and serving surrounding areas — for example a Chattanooga facility which might receive bulk goods by water and transship overland to Atlanta. Undoubtedly influenced by this thinking, one of the top local developers, Tom Lupton's Stone Fort Land Company is planning a 600-acre industrial park with barge facilities.

You'll find Jim Hunt, of the Industrial Committee of 100, Chattanooga Chamber of Commerce, particularly well supplied with information about sites in the area. His office has just completed a new industrial site book containing up-to-date data.

ID's team visited the new Shallowford-Airport Industrial District which lies just off the approaches to the municipal airport. This is a prime site in rolling terrain, bisected by limited access State Highway 153 and served by the L&N Railway. First unit, Burkart-Schier Chemical Company, is already under construction.

Also going into this new district is Brock Candy Company. Their move is the result of an intensive study made by Austin and Company, and was one of the keys to getting the new development off to a fast start. Major initiative was furnished by L&N rail official Ray Bisha.

ID's team also visited the East Chattanooga District where new units already located include Vulcan Iron Works, Nopco Chemical, and Chattanooga Wheelbarrow. Also seen in this area was a new site for Clark equipment.

Nashville Scene

Landing at Nashville, ID's flying team viewed the big new airport terminal construction project which will also involve surrounding industrial development. En route to the city there was an impressive array of new motels, restaurants, and shopping facilities. The new Life and Casualty Tower dominates the skyline of the downtown commercial area.

But the greatest progress is to be seen in the area of the state government buildings. Urban renewal projects have leveled sub-standard buildings and replaced them with open space or new construction. Just across from the Capitol is a striking new motor-hotel. On the adjoining site, steel is going up for an auditorium.

One of the most significant industrial developments in the Nashville area in recent years is the $14 million Ford Motor Company glass plant. This unit currently employs more than 2,500 workers on a continuous three-shift basis.

Probably the greatest excitement here in development circles is the prospect of barge traffic on the Cumberland. The Barkley Project, now under construction in Kentucky, is scheduled to make this a reality in 1964. Site planners are already at work on studies which will reflect the new pattern of commerce which will be possible.

A new industrial district is being developed in Nashville at the site of the old N. C. & St. L. shops. L&N Railway is financing the razing of old existing buildings and will offer two new sites totaling some 30 acres.

L&N also has a new Edenwold Industrial District 10 miles northeast of Nashville on the Cumberland. This 340-acre tract is next to the new site of Gates Rubber Company.

Memphis

Certainly no Tennessee city made a happier first impression on ID's flying editor than did Memphis, which has acted with imagination to solve the problem of frustratingly-long cab rides from airport to downtown. A new executive airstrip has been built on Mud Island in the Mississippi just off the downtown waterfront. A small electric ferry takes you from your airplane to downtown in less than five minutes.

But the big story of Memphis is large-scale industrial development, as befits one of the nation's major cities on the nation's biggest waterway. Most impressive is the big President's Island industrial area developed by the Memphis and Shelby County Port Commission under Clark Kittrell. Begun a decade ago, this $50-million project gives Memphis a current-free harbor and thousands of acres of new industrial land protected from floodin. Among firms quick to select sites were Cargill, Inc.; Koppers Co.; Layne Pipe and Supply; and Sinclair Refining.

Another industrial area which has attracted numerous plants is the Belz Industrial Park. This is a development of some 300 acres on the Illinois Central. The owners, Union Realty Company, have a number of properties in the Memphis area.

Just announced is Airport Industrial Park, to be developed by a group headed by Wilkinson and Snowden, Realtors. This is a 234-acre site located two and a half miles east of the municipal airport on the Frisco.

While ID's editor was in Memphis, rezoning hearings were held on a 500-acre district planned by Southern Railroad at nearby Germantown. Action was favorable and it is expected that Southern will begin engineering studies at once on this project which involves an investment of $1.5 million in raw land alone.

Knoxville

One of the most intelligent development approaches in Tennessee is to be found at Knoxville where efforts are now being channeled into a regional program. When you hear them mention "the great industrial valley of East Tennessee" they're talking about an eight-county sector which extends from southwest to northeast and includes a dozen industrial-minded cities.

This is an area already recognized by many national firms in their selection of important sites. In addition to the huge Oak Ridge plants and laboratories, the area includes big installations of Alcoa, Yale and Towne, Rohm and Haas, Foote Mineral, Union Carbide, Visking, Magnavox, and Burlington Hosiery.

ID's team was told by local developers Charles Herd and Dave Dickey of plans for a new medical research facility which would add further luster to the region's reputation for technological activities. The University of Tennessee, of course, is located here.

Progress in the preparation of industrial sites was reported by Jack Fletcher, local realtor who serves as an official of the industrial development corporation handling Pleasant Ridge Industrial Park. Terrain has always been a handicap in developing close-in sites, so Knoxville area promoters are enthusiastic about future possibilities now that significant sites are ready.

Tri-Cities

By the time ID's team touched down at the Tri-Cities airport in the northeast corner of the state, they had logged quite a few hours in the company airplane. As the crow flies, it's farther from Memphis to Tri-Cities than it is from Boston to Washington.

Here we were met by A. B. Coleman, manager of the Kingsport Chamber, and C. R. Strauss, his opposite number at Johnson City. A subsequent tour of the area included M. C. Gravely, Jr., at Bristol.

None of these alert area boosters are hesitant to admit that the Tri-Cities have enjoyed unusual success in attracting industry in recent years. Coleman points to the American-St. Gobain glass plant mentioned earlier. Gravely can cite Raytheon or Sperry in the electronics field. And Strauss can tell you about the just-announced plans of Great Lakes Carbon to locate its entire research operations near Johnson City.

While there is intense competition between the three, the Tri-Cities obviously recognize that in cooperation there are advantages. The airport is good proof of that. And they all are proud of East Tennessee State College, as well as road developments which will provide better flow of traffic in the whole area.

All three cities are working to provide more good sites for new industry. Gravely reports progress on Weaver Pike Industrial Park, with 134 acres, fully developed. Strong-Robinette Bag Company is now completing a new building in the park.

In the Kingsport area, Coleman says "nine industrial sites are now open." Each site has rail and is on or near the Holston River.

Smaller Cities

Certainly, no site survey of Tennessee should be confined to the larger urban areas. Some of the most attractive areas are to be found in the smaller communities. This has long been recognized by the state development agency and a substantial part of their program is devoted to small towns.

Among small cities having reported planned industrial districts, there are the St. Bethlehem Industrial District, Clarksville; Cleveland Industrial District, Cleveland; Gulf Mobile & Ohio Industrial District, Jackson; Jackson Industrial District, Jackson; Nashville, Chattanooga & St. Louis Industrial District, Jackson; Lebanon Industrial Subdivision, Lebanon; Arsenal Industrial District, Milan; Murfreesboro Industrial District, Murfreesboro; Newbern Industrial District, Newbern; and Springfield Industrial District, Springfield.

Interest in self-analysis is also evident among Tennessee cities and communities of all sizes. As of June 1 1961, the following Tennessee cities had submitted acceptable reports to ID's International Community Audit Registry: Centerville, Chattanooga, Dyer, Dyersburg, Erin, Johnson City, Knoxville, Lebanon, Manchester, Maryville-Alcoa, Memphis, Morristown, Oak Ridge, and Springfield.

Firms desiring copies of these notarized standard reports on plant location factors may obtain them gratis by writing to the chamber of commerce at these cities or by contacting the ID staff directly.

There are many other aspects of community development which show Tennessee's strength. ID's editor was impressed with the industrial park in Lebanon where he had a brief visit with then Mayor Bill Baird. Mr. Baird is Lt. Governor of the state and heads the advisory committee for the state development department. His community was first to utilize the bond finance act and has been successful in landing half a dozen plants.

It might also be mentioned in Tennessee's favor that the state seems to have weathered the worst of the school integration crisis and the outlook is for steadily improving relations. Schools have already been integrated in Nashville and elsewhere and tension has eased.

Murfreesboro is another bright spot. Last year this thriving city landed Park-Sherman Company, of Springfield, Ill.; Perfect Equipment Co., Kokomo, Ind.; and Shwayder Brothers, Inc., of Detroit.

Springfield, Tennessee, last year added three new plants with a total employment of nearly 100. McMinnville reports that "at every opportunity residents have voted to issue bonds . . . there have never been more than a few votes in opposition . . . this action shows an almost unanimous desire for industrial expansion."

Air-Conditioned Buildings: $6 Per Square Foot

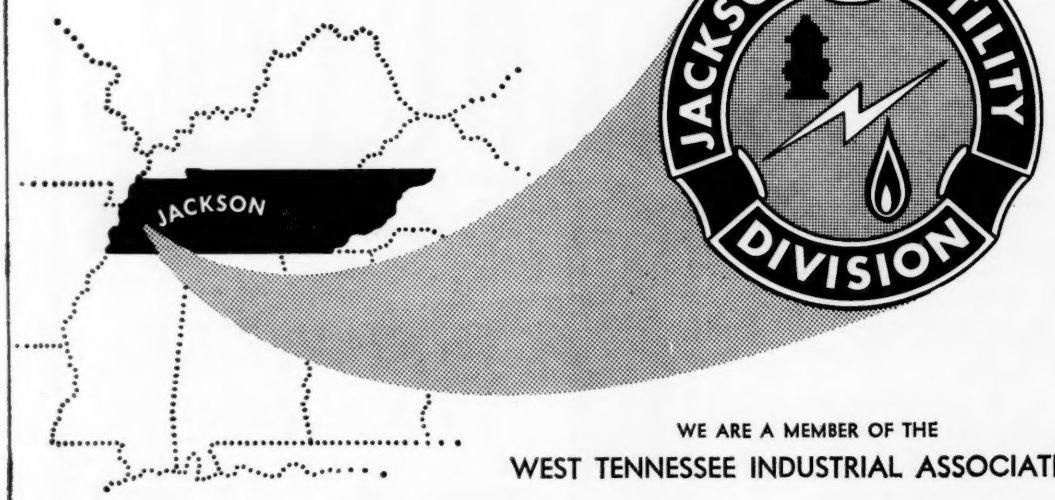
Tennessee advertises widely that the state offers a competitive advantage with respect to industrial building costs. To offer specific information, the Department of Conservation and Development has released a letter from H. V. Appen, Vice President, J. A. Jones Construction Company, which makes the following estimate for a 100,000 square foot structure; this building to be constructed as follows:

"1. Level lot, ordinary foundations.

"2. Concrete floor on grade.

"3. Concrete block construction (painted and waterproofed) with brick veneer on the street side; structural steel framing with columns 20 feet on centers; bar

Serving Jackson, Tennessee



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joist steel deck roof construction, with standard five ply built-up roofing.

"4. A. Ten percent of the floor area devoted to office space, with minimum number of partitions; plastered walls and ceiling; asphalt tile flooring, with sufficient steel sash and glazing.

Such a building, at the present time, would cost approximately $4.50 per square foot.

B. Office air conditioned only — $5.00 per square foot.

C. The whole building air conditioned — $6.00 per square foot.

"We trust this information is sufficient, around which you can build your case for presentation to prospective clients.

"You will, of course, realize that costs depend entirely on location, as to union or non-union, and accessibility to shipping points, etc."

Cultural and Recreation Aspects

Intelligent planning and cooperative action have raised the educational and cultural level of the State rapidly during the past 25 years. One of the best examples of this planning and cooperation is found in Nashville, where Vanderbilt University, George Peabody College and Scarritt College have formed a University Center to combine the facilities of the three colleges so their students would have available materials and equipment equal to most of the well-known universities in the nation. In this venture the three institutions maintain their individual identity, but join together to undertake several cooperative programs. The joint library which resulted from this merger is one of the finest in the South.

Of course, the University of Tennessee is widely-known for its Colleges of Dentistry, Medicine and Business Administration, and its science departments.

The State is also the home of several highly-respected private institutions of higher learning. Three of the world's best-known colleges for Negroes are located here — Fisk, Meharry, and Tennessee A & I.

The mild climate here and varied topography make the State one of the nation's favorite recreation areas. More than a million out-of-state tourists visit here each year. The Great Smoky Mountains National Park, Cherokee National Forest, the Cumberland Mountains, a system of 17 State parks and innumerable other playgrounds offer recreation possibilities for almost all the varied interests.

Tennessee's 19 large lakes provide unlimited boating and swimming, as well as some splendid fishing and duck hunting. (ID's editor has fond memories of childhood vacation hunting and fishing visits to his grandfather's farm at Perry, near Linden. Like most of Tennessee, this is an area of crystal-clear streams and "enough winter snow to track a rabbit".)

Because of space limitations, this is a too-brief mention of the "plus" factors Tennessee offers in the realm of culture and recreation attractions — a request to the State director of Information and Tourist Promotion will bring all the information you'll need on this subject.

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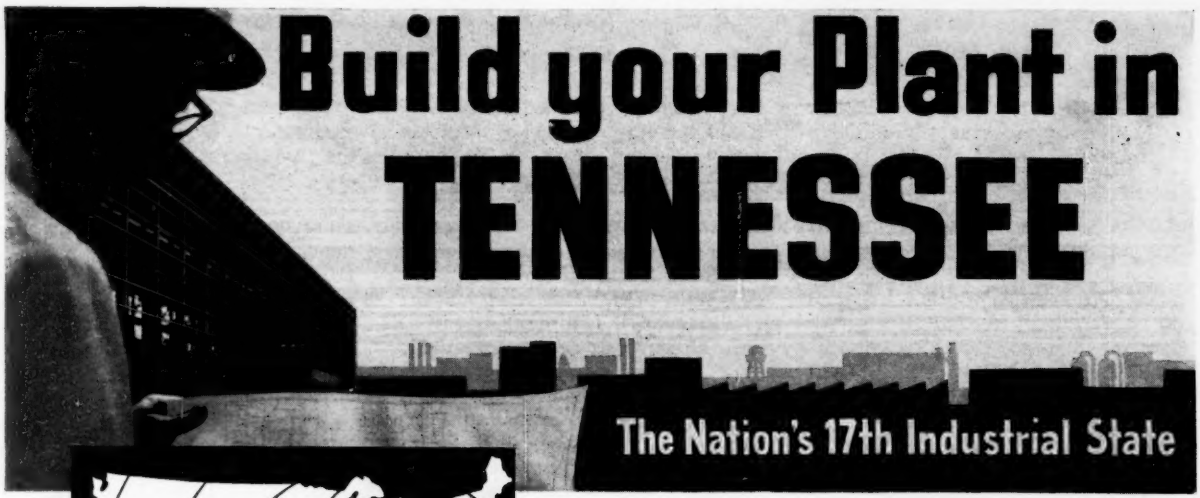
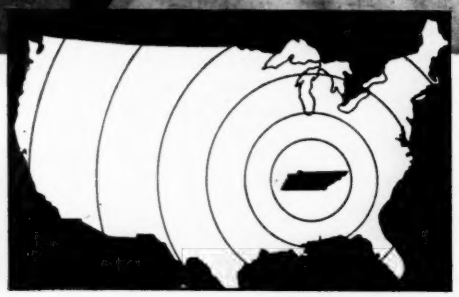
P. O. BOX 1710
JACKSON, TENNESSEE
MEMBER OF THE WEST TENNESSEE INDUSTRIAL ASSOCIATION





$354,721,000 INVESTED IN 718 NEW PLANTS AND EXPANSIONS IN 1959-60

Our Industrial Development Division helped find locations for many of these industries and will gladly do the same for you. All inquiries held strictly confidential. For full details regarding this service and Tennessee's advantages, write

CENTRAL LOCATION with rail, water, highway and air transportation makes Tennessee an ideal geographical location for national distribution.

LOW CONSTRUCTION COSTS — low as $5.50 per square foot for a new, modern plant, air-conditioned throughout.

GOOD TOWNS AND AMPLE LABOR. 279 cities and towns, including four large metropolitan cities, offer a wide choice of plant sites and an abundant supply of easily trained workers — both men and women.

LOW-COST POWER with electricity as low as 6.03 mills per kwh. Also coal, fuel oil, natural gas — and abundant water supplies.

STATE-APPROVED LOCAL FINANCING. Tennessee cities and towns are authorized by the Legislature to issue full faith and credit bonds to finance buildings for industry. Private funds also are available.

FINE GOVERNMENTAL CLIMATE, highly favorable to industry. Under Gov. Buford Ellington the State has a balanced budget, no personal income tax, a dynamic industrial development program, and has cut the use tax on production machinery from 3% to 1% to encourage industry.

TOOL AND DIE SHOPS — the South's largest concentration of tool and die shops for metal working industries.

INDUSTRIAL DEVELOPMENT DIVISION
Tennessee Department of Conservation and Commerce
C-187 Cordell Hull Building Nashville, Tennessee

RAILROADS EMPHASIZE SERVICE TO INDUSTRY

Basic Problems of the railroad industry are widely known. But there is significant progress to be found on many fronts — with industrial development activities high on the list. ID's second annual survey of rail development activities provides reports of progress from most of the country's major systems.

The 'Sixties are bringing many new ways of doing a day's work, and among the most rapidly changing segments of our economy are the railroads, which were regarded as citadels of tradition.

Increasingly free from the encumbrance of passenger traffic, the railroads are experimenting with faster and more efficient means of moving freight and are already far along in developing containers that can be transferred easily to truck trailers, barges, the holds of ships and even to the storage compartments of aircraft.

As uneconomic stretches of track are abandoned, more and more money is invested in boosting the carrying capacity of the main lines and important branches. Changes in the corporate structure include a number of mergers — mostly of the side-by-side variety as opposed to the end-to-end variety — and many more are in the offing. Among the mergers already accomplished are those of the Norfolk and Western and the Virginian, the Erie and the Delaware and Lackawanna and the Chicago and North Western and the Minneapolis and St. Louis.

Among the mergers pending before the Interstate Commerce Commission are the following:

Atlantic Coast Line — Seaboard Air Line

Chesapeake & Ohio — Baltimore & Ohio

New York Central — Baltimore & Ohio.

Southern Pacific — Western Pacific

Santa Fe — Western Pacific

Great Northern — Northern Pacific — Burlington — Spokane, Portland & Seattle

Norfolk & Western — Nickel Plate — Wabash

Pennsylvania — Lehigh Valley

Southern — Central of Georgia

New internal communications systems, such as the Rio Grande's microwave system that transmits facsimiles of waybills, are part of the revolution in methods making for faster service. The results are beginning to show up in national statistics, as for example in the increase in average speed of freight trains from 15.7 miles an hour — counting all stops — in 1944 to 19.5 miles an hour in 1959.

An indication of growing efficiency is the increase in freight train loads between 1949 and 1959 from 1,137 tons per train to 1,443 tons.

Railroad activities in area development, which go back more than a century and are among the most sophisticated in this field, show a high

degree of responsiveness to the needs of industry. Staffs in most Class 1 lines and in many smaller lines are large and experienced and have an unusual insight into the commercial potentialities of their areas.

As might be expected, the railroads are particularly well informed on sites along their lines. Almost all of the respondents to ID's 1961 questionnaire on area development activities of railroads maintain files on available industrial sites, own or share in ownership of sites and conduct specific site studies for companies. Over three-fourths of them are active in preserving prime sites for industrial use by giving guidance to communities in setting up land-use planning and zoning programs.

General information on the areas they serve is another strong point in railroad programs. The great majority conduct or assemble research studies dealing with their area, and almost as many maintain files of information of interest to the site-seeker. Subjects most apt to be covered fully are power and fuel, water and waste, transportation, raw materials and legislation and taxes. In most cases, information on individual communities can be made available in comparable form.

More than half are prepared to help in the design and layout of new plants, particularly with respect to the location of sidings. Nearly half are able to provide financial assistance, directly or indirectly, to new or expanding plants.

Code of Development Services

A Conduct or assemble research studies on service area.
B Maintain complete files on service area on the following basic location factors:
  1 Markets
  2 Labor
  3 Raw materials
  4 Power and fuel
  5 Water and waste
  6 Climate
  7 Transportation
  8 Financing
  9 Legislation and taxes
  10 Civic characteristics
C Maintain files on the above information for individual communities in service area.
D Assemble above information on communities in comparable form such as an audit or survey.
E Serve as an Area Registry for the International Community Audit Registry.
F Maintain files on available industrial sites, covering cost, ownership, availability of utilities, zoning, etc.
G Own or share in ownership of developed or undeveloped sites.
H Conduct specific site studies.
I Offer assistance in the design and layout of new plants.
J Provide financial assistance to new or expanding plants either directly or indirectly.
K Participate in long-term community improvement programs.
L Aid communities in formulating and carrying land-use planning and zoning programs.
M Assist communities in setting up urban redevelopment corporations.
N Help communities set up local foundations or development corporations.
O Engage in promoting service area and its communities through:
  1 National advertising.
  2 Direct mail programs distributing surveys or brochures.
  3 Production of distribution of motion pictures dealing with community development.
  4 Participate in workshops and orientation sessions.

ALABAMA

Gulf, Mobile & Ohio Railroad Co., 104 St. Francis Street, Mobile, T. T. Martin, Vice President, staff of 7. Serves west from Chicago to Kansas City and southward to St. Louis, Memphis, Birmingham, Montgomery, Mobile, and New Orleans; first track mileage is 2,766 and multiple track or CTC mileage is 300. Annual freight traffic totals 19.7 million tons and 5.67 billion ton-miles. Special facilities include multi-level auto rack cars, trailers on flat cars, and a pier at Mobile. The railroad has 9 industrial areas for sale totaling 600 acres, rail sidings feasible . . . A, B, C, F, G, H, J, K, L, 03, 04.

ARKANSAS

Delta Valley and Southern Railway, Wilson, Arkansas. Railway serves Mississippi County Arkansas, with first track mileage totaling two. Total tonnage carried during 1959 was 53,179. Special facilities include interchange tracks at Delpro, Arkansas with Frisco Railway. No industrial development department. Railway has three industrial sites available, totaling 200 acres, 10% having rail sidings.

CALIFORNIA

McCloud River Railroad Company, McCloud, California. Railroad serves northern California, with first track mileage totaling 100. Special facilities include main line connections with Southern Pacific, Great Northern, and Western Pacific. Handles all types of freight. No industrial development department. The railroad has four industrial sites available, totaling 100 acres, all served by rail sidings.

Sacramento Northern, 526 Mission Street, San Francisco, California. Serves San Francisco Bay Area, Northern California Central Valley, with first track mileage totaling 226. Total tonnage carried is 318,095. Operates part-time industrial development department, of which F. B. Stratton is director. Approximately 100 industrial sites available, totaling approximately 900 acres, all served by rail sidings.

Santa Maria Valley Railroad Company, P. O. Box 340, Santa Maria, California. Railroad serves Santa Maria Valley with first track mileage totaling 18. Total tonnage carried is 984,941. No industrial development department. One industrial site available with a total acreage of 23 and served by rail sidings.

Southern Pacific Company, 65 Market Street, San Francisco, L. E. Hoyt, Manager of Industrial Development (San Francisco); C. W. Murrell, Manager of Industrial Development (Houston), staff of 43. Serves California, Oregon, Nevada, Utah, Arizona, New Mexico, Texas, and Louisiana; first track mileage is 13,058 and multiple track mileage is 7,100. Annual freight traffic totals 95 million tons, with 44 billion ton-miles. There are interchanges with all other types of carriers. The railroad has 5,000 acres of industrial sites for sale, all with rail siding . . . A, B1 through B10, C, D, F, G, H, I, K, L, M, N, O1 through 04.

Stockton Terminal & Eastern Railroad, 1330 North Broadway, P. O. Box 1057, Stockton, Calif.; T. K. Beard, President, Leonard Hardaway, Jr., Vice-President & General Manager, area development staff of 2. Line extends 19 miles from East Stockton to Linden, California; 107,000 tons carried an average of 8.3 miles per ton. Interchanges with Santa Fe, Southern Pacific, Western Pacific, Tidewater Southern and Central California Traction. Two industrial sites with a total of 65 acres for sale; one of these has a siding and the other could be provided with one if required. A, C, D, G, H, I, J.

State Belt Railroad, Foot of Battery St., San Francisco 11, California; operated by the San Francisco Port Authority. Serves San Francisco waterfront with 60 miles of switching track. Connects directly with Southern Pacific and by car-ferry barges with other Bay Area lines. Part-time industrial development under supervision of J. H. Myers, Traffic Manager.

Western Pacific Railroad System Lines, 526 Mission Street, San Francisco, California. System serves northern and central California, with first track mileage totaling 1,133. Total tonnage carried is 7,069,333. Special facilities include piggyback ramps. Operates full-time industrial development department, of which F. B. Stratton is director. The lines have 20 industrial tracts available, totaling 3,659 acres, all served by rail sidings.

COLORADO

Denver and Rio Grande Western Railroad Company, 1531 Stout St., P. O. Box 5492, Denver 17, Colorado, R. C. Cavness, Director of Industrial Development, and a staff of 5. The railroad has 2,072 miles of first track in Colorado, Utah and northern New Mexico; CTC mileage is 574. Total tonnage carried is 18 million and gross and net ton-miles are 11 billion and 5 billion, respectively. Yard interchange facilities are located at Denver, Pueblo, Salt Lake City and Ogden. Industrial sites for sale, all with sidings, have a total acreage of 500. A, B2-7, B10, C, F, G, H, I, L.

CONNECTICUT

New York, New Haven & Hartford Railroad Co., 54 Meadow St., New Haven 6, Conn.; E. J. Barrett, Gen. Mgr., Industrial Development, staff of 8. Serves southern New England and southeastern New York; first-track mileage is 1,717 and multiple-track or CTC mileage is 1,598. Annual, freight traffic totals 18.5 million tons and 2.81 billion ton-miles. Special facilities include lighterage and car floats at New York; piggy-back facilities at New York, New Haven, Providence, Springfield and Boston; and interchange with waterborne carriers at Boston, Providence and New Haven. The railroad has 3,000 acres of industrial sites in 100 tracts for sale; 90 per cent of these can be served by sidetrack . . . A, B2, B4, B5, B7, B8, B9, B10, C, D, F, G, H, I, J, K, L, M, N, 01, 02, 04.

information about

Kansas City

for industrial site seekers

Located only a short distance from the exact geographical center of the United States, Kansas City can rightly be called the "Heart of America." As such, it has become famous for its excellent transportation system, large stockyards, giant grain elevators, and many processing plants. Over a million people live here—in a metropolitan land area of more than 16,000 square miles. Water is abundant. Opportunity for industry abounds.

Moreover, Kansas City's urban development programs are keeping pace with its industrial growth. Many new highways, bridges, parks, and boulevards have been recently completed. Kansas City's downtown area, with its new expressway loop, spacious underground garage, and attractive office buildings, is one of the nation's most modern. Cultural and recreational facilities are mushrooming. All of this is being done without any major increase in taxes. Kansas City's per capita debt is approximately the same as it was in 1940.

The Rock Island has choice industrial sites available in the Kansas City area. If the following information interests you, get in touch with us for more specific details. We'll work with you in strictest confidence.

LABOR: A growing labor force of nearly 450,000 in the standard metropolitan area, many trained in the defense industries—an increase of 20% in 10 years; 53.8% with at least 12 years of schooling.

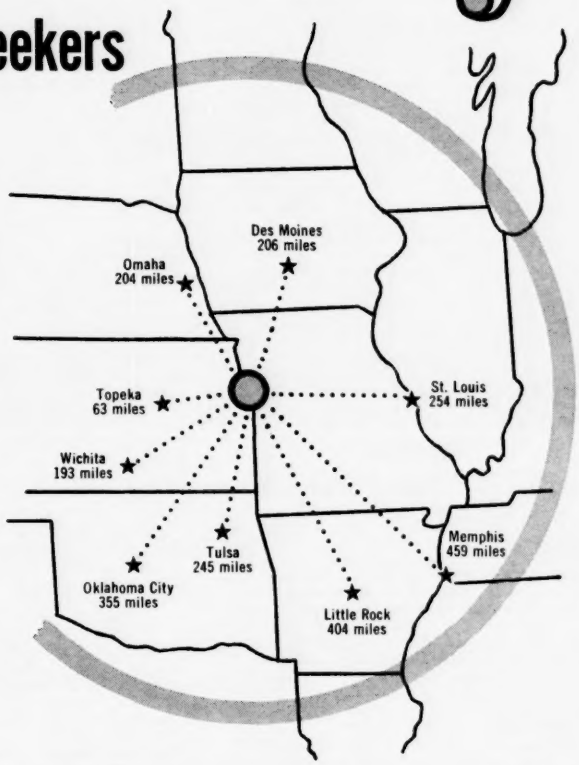
POWER: Four power companies with a present generating capacity of 1,154,200 KW and a planned expansion of 545,000 KW; 2 gas companies with 74 billion cu. ft. of natural gas in reserve storage.

TRANSPORTATION: The Rock Island and 11 other railroads; 8 airlines; 145 truck lines; 2 barge lines; 17 bus companies.

HOUSING: 90,067 new housing starts in the area since 1950; the most popular new construction sells in the range of $17,000; rentals average $25.00 per unfurnished room per month.

THE COMMUNITY: 129 elementary schools in the metropolitan area; 24 junior and senior high schools; 53 private elementary schools; 12 private secondary schools; approximately 51 trade and vocational schools; 2 junior colleges. Twelve colleges and universities serve students from the area. There are 34 major hospitals, with 6,324 beds; 57 parks; 62 playgrounds; 16 libraries. Per capita cost of the Kansas City government is fifth lowest among the 23 cities in its population group. And Kansas City has the lowest estimated basic living cost of the 20 major cities in the United States, according to recent studies.

COMMERCIAL SERVICES: The Kansas City area has 1,754 manufacturing firms producing a wide variety of products. Foods, transportation equipment, fabricated and primary metals, textiles, and paper products are among the most important. Wholesale sales are about 3.5 billion dollars a year.



CLIMATE: Average annual temperature is 56°; average normal precipitation is 35.31 inches.

INFORMATIVE BROCHURE describes 12 key markets in Rock Island Country. This fact-packed "Rock Island Country" booklet, as well as further details on industrial sites in Kansas City, may be obtained by writing on your company letterhead to P. J. Schmidt, Manager, Industrial Development, Department 168 Rock Island Lines, La Salle Station, Chicago 5. The brochure and supplementary information will be mailed in a plain envelope marked "Confidential."

Rock Island

ROCK ISLAND LINES

The railroad of planned progress
... geared to the nation's future
Chicago 5

DISTRICT OF COLUMBIA

Southern Railway Company, Washington, D. C. Railway serves entire Southeast, with first track mileage totaling 6,269. Total tonnage carried is 66,409,702. Special facilities include "push button" yards at Knoxville, Chattanooga, Birmingham and Atlanta. Operates full-time industrial development department, of which F. C. Toal is director. Railway has substantial acreages near eight important cities and smaller acreages at various points available. Also, plans and accompanies industrial prospects on site and community inspection trips. Studies for track installation and planned industrial districts.

GEORGIA

Central of Georgia Railway Company, 227 West Broad Street, Savannah, Georgia. Railway serves Georgia, East and Mid-Alabama, Chattanooga, Tennessee, with first track-mileage totaling 1,744. Total tonnage carried is 18,998,475 net. Operates full-time industrial development department, of which Harrell L. Perkins is director. Railway has industrial sites located in principal cities available totaling 3,000 acres, all served by rail sidings.

Chattahoochee Valley Railway Company, West Point, Georgia. Railway served Troup County, Georgia, Lee and Chambers Counties, Alabama, with first track mileage totaling 27. Total tonnage carried is 175,000. Special facilities include joint agencies at West Point, Georgia and Bleecker, Alabama. Operates part-time industrial development department which is headed by R. J. Morton, President. Railway has several industrial sites available, totaling 15 acres, and served by rail sidings.

ILLINOIS

Atchison, Topeka and Santa Fe Railway Company, 80 East Jackson Blvd. Chicago 4, Illinois; G. W. Cox, Assistant to the President, and a staff of 65 assigned to area development. The area served extends from Chicago to Texas and California; first track measures 12,996 miles and there are 2,033 miles of multiple track and 2,354 miles of track with traffic control signaling. In 1960, the railroad carried 65.3 million tons of freight and reported 36.6 billion ton-miles. There are facilities for carrying trailers on flat cars. Planned industrial sites along the system total several thousand acres. A, B, D, F, G, H, I, L, M, N, 01, 02.

Chicago, Burlington, & Quincy Railroad, 547 West Jackson Boulevard, Chicago 6, Illinois; O. O. Waggener, Director, Department of Industry and Agriculture, with staff of 7. Not including the Colorado & Southern and the Fort Worth & Denver City, the line serves 11 mid-western states from Illinois to Colorado and Montana; it operates 8,648 miles of first track, 1,028 miles of multiple track and 1,528 miles CTC track. Tonnage carried totals 49 million and ton-miles total 15.8 billion. The railroad serves 40 piggy-back ramps in major cities, and many docks on navigable waterways and pipeline terminals. Several thousand acres of industrial sites are held for sale in major cities and in many smaller communities as well; all are adjacent to CB&Q tracks and many have lead trackage. A, B1 through B10, C, F, G, H, I, K, L, N, 02.

Chicago & Eastern Illinois Railroad, 646 Chicago Road, Chicago Heights, Illinois, Carlton A. Ernst, Director, Industrial Development, and a staff of 2. The 862.5 miles of first track serve Illinois and western Indiana; freight traffic totals 15 million tons and 2.38 ton-miles. Interchange facilities include piggypack and water-rail transfers on the Ohio River. Several thousand acres of industrial sites in 6 communities are for sale; all sites have rail siding. A, C, D, F, G, H, K, L.

Chicago and North Western Railway Company, 400 West Madison St., Chicago 6, Illinois; Gene F. Cermak, Director of Industrial Development, and a staff of 15. The area served extends from Chicago north to Upper Michigan and west to Montana and Wyoming; first-track mileage is 10,729 and multiple-track mileage is 1,084. Total tonnage carried is 52.9 million and ton-miles total 29.1 billion. The railroad serves all the major ports on the west side of Lake Michigan and the south side of Lake Superior. Hundreds of industrial sites with sidings are available, with total acreage extending into the thousands. A, B1 through B10, C, D, E, F, G, H, I, J, K, L, N, 01, 02.

Chicago, Rock Island & Pacific Railroad Company, 137 West Van Buren St., Chicago 5, Illinois; P. J. Schmidt, Manager — Industrial Development, and a staff of 9. The line serves a 14-state area, extending from Chicago and Memphis on the east to Colorado and New Mexico and from the twin Cities to the Gulf Coast; it has 7,526 miles of first track, 572 miles of double track and 942 miles of CTC. Freight traffic amounts to 40.6 million tons and 13.7 billion ton-miles. Interchange facilities with trucks, barges and deep-water shipping are maintained at Chicago, Calumet Harbor, Texas City and Galveston. There are 100 industrial sites for sale, all with rail sidings, covering a total of 2100 acres. A, B1-10, C, D, F, G, H, I, J, K, L, M, N, 01, 02, 04.

Elgin, Joliet & Eastern Railway Company, 208 South LaSalle St., Chicago 4, Illinois; J. E. Arado directs full-time industrial development service. The line operates 205 miles of first track in the Chicago metropolitan area in Illinois and Indiana and has direct interchange of cars with all railroads entering the Chicago area. Choice industrial sites available in the Chicago suburbs. A, G, H, K, L, N.

Illinois Central Railroad, 135 East 11th Place, Chicago, J. S. Frost, Director of Industrial Development, staff of 4; part-time help from personnel in traffic offices throughout the system. Serves 14-state area Great Lakes to Gulf Coast and west to Omaha. First track mileage is 6,500 and multiple track or CTC mileage is 1,018. Annual freight traffic totals 66.6 million tons and 17.2 billion ton-miles. Special facilities include piggy-back ramps, Stuyvesant Docks at New Orleans, also other port and river-rail facilities. The railroad has 72 industrial sites for sale totaling 5,200 acres, all with rail sidings . . . A, B1-10, C, D, E, F, G, H, I, J, K, L, M, N, 01-4.

Illinois Terminal Railroad, 710 North 12th Boulevard, St. Louis 1, A. S. Taylor, Asst. to Vice President — traffic, staff of 2. Serves the Illinois suburbs of St. Louis northward to Decatur, Springfield and East Peoria; first track mileage 334. and .42 multiple track or CTC mileage. Annual revenue tonnage totals 5.89 million tons and 421 million revenue ton-miles. Special facilities include rail-barge at Alton, Ill., ITRR coal dock and Laclede Steel dock at Granite City, and rail-truck ramp at National City, Ill. The railroad has 5 major sites for sale totaling 225 acres. All are served by rail siding . . . A, B2, B3, B4, B5, B7, B8, B9, C, F, G, H, I, J, 01-2.

The Milwaukee Road, Union Station, Chicago, Illinois; S. J. Cooley, Director — Industrial and Real Estate Development, and a staff of 9. The railroad serves 12 midwestern and northwestern states from Indiana and Michigan to Washington; there are 9,721 miles of first track and 693 miles of multiple track or CTC. Freight traffic amounts to 38.3 million tons and 13.6 billion ton-miles. Interchange facilities include Flexi-Van and piggyback. Industrial sites for sale total 3,600 acres; all sites have rail sidings. A, B1-10, C, D, F, G, H, I, J, K, L, 04.

Monon Rail Road, 608 South Dearborn St. Chicago 5, Illinois; Rudolph H. Grabow, Manager — Industrial Department, and staff of 3. The line has 540 miles of first track, mostly in Indiana, from Chicago and Michigan City south to Indianapolis and Louisville. Freight tonnage is 5.97 million. Piggyback facilities are available in Louisville and in Hammond, Indiana. The 8 industrial sites for sale total 491 acres; one site has a rail siding. A, B3, B4, B5, B9, B10, C, F, G, J, K, L, N.

Toledo, Peoria and Western Railroad Company, Peoria, Illinois, Railroad serves Central Illinois, with first track mileage totaling 239. Total tonnage carried is 3,847,748. Special facilities include 2 barge connections, Illinois and Mississippi Rivers. Part-time industrial development department, of which J. R. Coulter is director. Six industrial sites available, totaling 6,400 acres, all served by rail sidings.

INDIANA

Chicago, South Shore and South Bend Railroad, Michigan City, Loren F. Pohl, Chief Engineer. Serves the lower end of Lake Michigan, first track mileage is 76 and multiple track or CTC mileage is 20. Annual freight traffic totals 3.6 million tons and 133 million ton-miles. The railroad has 5 industrial sites for sale totaling 250 acres, 50 percent of which have rail siding . . . A, B4, B5, B6, B7, B9, B10, C, D, F, G, H, I, K, L, M, N.

KENTUCKY

The Carrollton Railroad, Carrollton, Kentucky. Railroad serves Carroll County, Kentucky, with first track mileage totaling 8.8. Total tonnage carried is 107,000. Trackage close by Ohio and Kentucky Rivers. No department specifically devoted to industrial development activities. No industrial sites available.

Kentucky and Indiana Terminal Railroad Company, 2910 North Western Parkway, Louisville, Kentucky. Railroad serves Louisville, Kentucky, with first track mileage totaling 130. No special facilities for interchange with other types of carriers. However, direct interchange of cars is made between the Kentucky and Indiana Terminal and eight major railroads. Full-time industrial development department, which is headed by Joseph J. Gaynor. 150 acres of industrial sites available.

Kentucky and Tennessee Railway, Stearns, Kentucky. Railway serves Stearns, Kentucky and McCreary County Kentucky in general, with first track mileage totaling 10.50. Total tonnage carried is 411,154. No industrial development department. Person to contact regarding industrial development is L. C. Bruce, Vice President. Railway has 9 acres of industrial sites available, all served by rail sidings.

Louisville and Nashville Railroad, 908 West Broadway, Louisville, Kentucky. Railroad serves states of Alabama, Florida, Georgia, Indiana, Illinois, Louisiana, Missouri, Mississippi, Kentucky, Ohio, North Carolina, Tennessee, and Virginia, with first track mileage totaling 5,696. Total tonnage carried is 73,378,095. Special facilities include loading ramps in a number of cities for handling "piggyback" trailers, continuous conveyer at Pensacola for conveying Chilean nitrate from ship to shore, pipe line at same location for handling liquid creosote from ship to dockside storage tanks. Port facilities available at both Mobile and New Orleans. Operates full-time industrial development department, of which R. E. Bisha is director. Railroad owns several thousand acres of industrial development property scattered over its 5,700 miles of main line trackage, it is in numerous parcels and all of it is considered accessible to track service.

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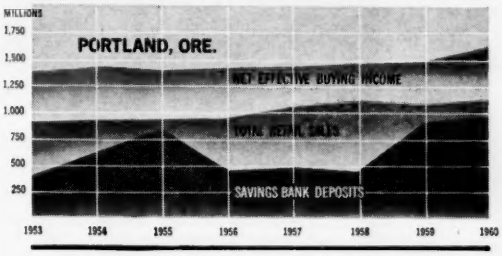
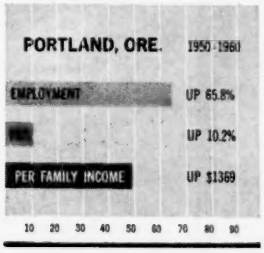
PORTLAND
for instance

Locate your new plant or warehouse in the famed "City of Roses", one of the West's most active population centers where growth in manufacturing value is 27.7% above the national average

FOR SALE OR LEASE *135 acres of fully developed sites in Union Pacific's Rockwood District tract*





Portland is to be counted among those amazing areas of the West where industrial growing pains are constant and spreading. One look at the above charts tells the story.

One of the choice locations (pictured here) is approximately 10 miles from Portland's downtown business center and immediately accessible to Union Pacific main line and U.S. Hwy 30. Streets are paved; all utilities are in; some nationally known industries are now located in Rockwood. 135 acres are still available.

When you locate in Portland you locate along the route of the Union Pacific—the road that has helped spearhead industrial growth of the West since the rails first opened the territory. Its modern facilities and equipment are a promise of fast, reliable freight service.

Locate in the West—where 9 out of 10 industrial markets are outpacing the national growth.

For more detailed information on this or other sites in the West see your nearest Union Pacific representative, or address

Industrial Development Department

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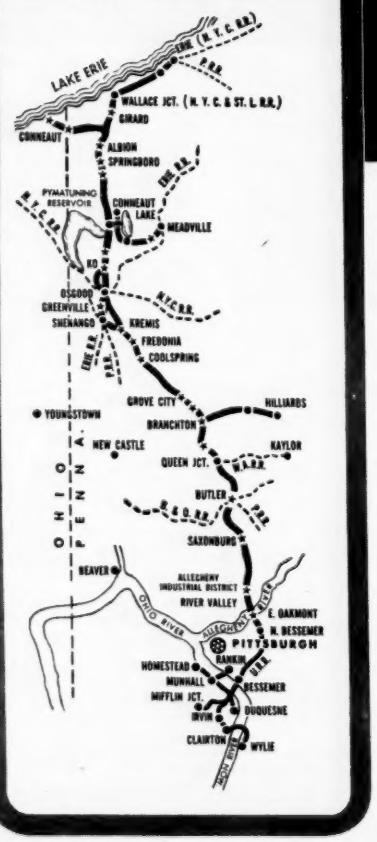

The Bessemer Area is one of the world's greatest industrial markets with a $5-billion primary and fabricated metal output. Reach out 125 miles—and you tap a lucrative market of over 8 million consumers.

Other Bessemer Area advantages are: 24-hour delivery of steel and other basic materials; extensive deposits of coal, limestone, clay and aggregates; a labor force of over a million widely diversified as to skill; choice of unexcelled, adaptable, flood-free sites served by abundant water, gas and power.

Investigate today! Write or phone for location factors on any of the suitable plant sites indicated by stars on the map. No obligation. Strictly confidential.

Phone or write
E. J. Smith, Jr., Manager
Industrial Development Dept.

BESSEMER and LAKE ERIE RAILROAD CO.

INDUSTRIAL DEVELOPMENT DEPARTMENT

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RAILROADS

LOUISIANA

The Louisiana and North West Railroad Company, Homer, Louisiana. Railroad serves Northwest Louisiana and Southwest Arkansas with first track mileage totaling 62.64. Total tonnage carried is 350,000 annually. Operates a full-time industrial development department, of which J. Reuel Coleman is manager. Approximately 200 acres of industrial sites available, rail sidings can be installed on short notice.

Reader Railroad, Box 150, Prescott, Arkansas. Railroad serves Western Ouachita, and Eastern Nevada Counties in Arkansas, with first track mileage totaling 23½. Total tonnage carried is 29,552. Operates part-time industrial development department, headed by T. W. M. Long, president. Railroad has 4 industrial sites available, totaling 160 acres, all served by rail siding.

MAINE

Maine Central Railroad Company, 222 St. John Street, Portland, Maine. Railroad serves States of Maine, Northern New Hampshire and Vermont, with first track mileage totaling 936. Total tonnage carried is 7,013,369. Special facilities include wharves, warehouses and storage sheds for handling package and bulk cargo. Operates full-time industrial development department, of which J. P. Schully is director. Industrial sites available for sale or lease, 50% of which is served by rail sidings.

MARYLAND

Baltimore and Ohio Railroad Company, Baltimore 1, Maryland; Arnath W. Knabe, Manager of Industrial Development, and a staff of 19. The railroad operates an average of 5,909 miles of track between New York on the east and Chicago and St. Louis on the west, total tonnage is 99.5 million and ton-miles are 24.8 billion. Numerous industrial sites with sidings, with a total acreage of 3,453, are available. A, B2 through B9, C, D, F, G, H, I, K, L, 01, 04.

Western Maryland Railway Company, 300 St. Paul Place, Baltimore 2, Maryland; William E. Johnston, Manager of Industrial Development, and a staff of 2. The railroad has 842 miles of first track, 103 miles of multiple track and 74 miles of CTC in central and western Maryland, southern Pennsylvania and northern and central West Virginia. Interchange facilities include Tidewater Terminal at Port Covington (Baltimore), with coal, ore, grain and general merchandise piers and car float operations; piggy-back facilities are at Baltimore, Hagerstown and Cumberland, Maryland; and York, Hanover, Gettysburg, Waynesboro and Chambersburg, Pennsylvania. The 45 industrial sites for sale total 1,800 acres; ten per cent of these have sidings. A, B, C, D, F, G, H, I, L, N, 01, 02.

MASSACHUSETTS

Boston and Maine Railroad, 150 Causeway Street, Boston 14, Massachusetts. Railroad serves northern New England, operates 1,574 miles of first track. E. F. Reed is Manager of the Industrial Development Department.

New York, New Haven and Hartford Railway Company, Boston, Massachussetts. Railroad serves Connecticut, Massachusetts, Rhode Island, and Southeastern New York, with first track mileage totaling 1,762. Total tonnage carried is 19,905,149. Special facilities include piggy-back and lighterage of freight-New England Transportation Co. operates full-time industrial development department, of which Percy E. Benjamin is manager. The Railroad has numerous industrial sites available for sale, totaling 2,000 plus acres, 99% of which is served by rail sidings.

MICHIGAN

Boyne City Railroad Company, 112 South Park Street, Boyne City, Michigan. Railroad serves Boyne City, Michigan to Boyne Falls, Michigan, with first track mileage totaling 7.2. Total tonnage carried is 23,169. Pennsylvania Railroad at Boyne Falls, Michigan. No department specifically devoted to industrial development activities. Railroad has 1 industrial site available for sale, 7 acres, rail sidings.

Detroit, Toledo & Ironton Railroad, 13530 Michigan Avenue, Dearborn, Donald G. West, General Industrial agent, staff of 2. Serves southeast Michigan and Ohio, first track mileage is 443. Annual freight traffic totals 211,395 cars handled. Special facilities include piggy-back terminals at Dearborn and Trenton, rail to barge facility at Ironton scheduled for this year. The railroad has 10 industrial sites for sale totaling 1,000 acres with rail sidings available to all . . . A, B1-10, C, D, F, G, H, I, K, L, N, 01-2.

Grand Trunk Western Railroad Company, 131 West Lafayette, Detroit 26, Michigan; H. B. Secor, Industrial Commissioner, and a staff of 4. The railroad, which is an American branch of Canadian National Railways, extends from Port Huron and Detroit to Chicago; first-track mileage is 951 and there are 407 miles of multiple track or CTC. Tonnage is 16.6 million and ton-miles are 6.67 billion. The railroad has 12 industrial sites for lease or sale, all suitable for sidings; total industrial acreage is 600. B2, B4, B5, D, F, H, I, J, K, L, M.

MINNESOTA

Great Northern Railway Company, 175 East Fourth St., St. Paul 1, Minnesota; E. N. Duncan, Director, Industrial Development, and a staff of 15. The line extends from Minneapolis and St. Paul to the Pacific Northwest, serving 10 states; first-track mileage is 8,280 and there are 788 miles of multiple or CTC track. Freight traffic totals 48 million tons and 35 billion ton-miles. There are a variety of interchange arrangements with other carriers and industrial sites are available at many points along the line for lease. A, B1-10, C, D, F, G, H, K, L, M, N, 01, 02, 03.

Northern Pacific Railway Company, Northern Pacific Building, St. Paul 1, Minnesota; P. D. Edgell, General Manager, Properties and Industrial Development, and 137 other personnel. The railroad's 2,742 miles of first track extend from Wisconsin and Minnesota across North Dakota, Montana and Idaho to Oregon and Washington; there 501 miles of double track and 250 miles of CTC. Annual traffic is 26.2 million tons and 11.7 billion ton-miles. Trailer-on-flat-car and piggy-back facilities are available. More than 5,000 acres of industrial land, all on sites with sidings, are available for lease. A, F, G, H, J, L, N, 01, 02.

Soo Line Railroad, Soo Line Building, Minneapolis 40, George T. Bergren, Industrial & Real Estate Commissioner, staff of 9. Serves the upper Midwest from Chicago and Sault Ste. Marie to Montana; first-track mileage is 4800. Annual freight traffic totals 21 million tons. Special facilities include access to Great Lakes ports. The railroad has industrial sites for sale . . . F, G, H, I.

MISSISSIPPI

Bonhomie and Hattiesburg Southern Railroad Company, Fernwood, Miss., Iddo L. Enochs, President. Serves the area from Hattiesburg to Beaumont, Miss. First-track mileage is 27. Annual freight traffic totals 240,268 tons and 6.0 million ton-miles. The railroad has regular interchange tracks. The line has 2 industrial sites for sale totaling 37 acres with rail sidings.

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Jacksonville, Florida

ATLANTIC COAST LINE RAILROAD

Serving the Southeast Coastal 6

pany, 1302 Main Street, Columbus, Mississippi. Railway services Northeast Mississippi and Mississippi Delta, with first track mileage totaling 168. Total tonnage carried is 1,148,580. Z. P. Hawkins handles industrial development activities.

Fernwood, Columbia & Gulf Railroad Company, Fernwood, Miss., Iddo L. Enochs, President. The railroad serves the area between Fernwood and Columbia, Miss.; first-track mileage is 44. Annual freight traffic totals 357,656 tons and 8.9 million ton-miles. Special facilities include regular interchange tracks. The railroad has 2 industrial sites for sale totaling 152 acres with rail siding.

Mississippi Export Railroad Company, Moss Point, Mississippi. Railroad serves Lucedale South through Moss Point to Pascagoula, Mississippi, with first track mileage totaling 42. Total tonnage carried is 564,690. Operates part-time industrial development department, which is headed by W. M. Dutton. Railroad has 6 industrial sites available, totaling 140 acres, 60% of which is served by rail sidings.

MISSOURI

Kansas City Terminal Railway Company, Union Station, Kansas City, Missouri; R. E. Barnes, Valuation and Contract Engineer. With 27 miles of first track, this switching and terminal line connects with twelve railroads entering Kansas City and has interchanges with truck lines. Its 5 industrial sites, 4 of which have sidings, total 15 acres. A, F, G, H, I.

Manufacturers Railway Company, 2927 South Broadway, St. Louis, Missouri. Railway serves St. Louis Switching District, with first track mileage totaling 42.36. Railway has connections with all railroads serving St. Louis and East St. Louis. Has facilities for handling liquid bulk commodities. Operates part-time industrial development department, which is headed by W. M. Daughtrey. Railway has industrial sites available for sale and are served by rail sidings. A, B, E, F, G, J, O.

Missouri-Kansas-Texas Railroad Company, St. Louis, Missouri; W. W. Renfro, Director of Industrial Development, Katy Building, Dallas 2, Texas, and a staff of 7. The railroad operates 2,892 miles of first track and 75 miles of multiple or CTC track in Missouri, Kansas, Oklahoma and Texas. Recent traffic statistics indicate 13.9 million tons and 4.04 billion ton-miles. There are piggyback facilities at all major terminals. The 74 industrial sites for sale, all of which have rail sidings, total 512 acres. A, B1 through B10, C, F, G, H, K, L, M, 01, 02.

Missouri Pacific Railroad Company, St. Louis, Missouri. The Railorad serves the Midwest and Southwest, with first track mileage totaling 9,456. Total tonnage carried is 63,721,233. Special facilities include facilities for interchange with all forms of water and motor carriers. Operates full-time industrial development department, of which E. Smith Reed is director. Railroad has numerous industrial sites for sale, totaling several hundred acres.

St. Louis-San Francisco Railway Company, 906 Olive Street, St. Louis 1, N. A. Kirchoff, Asst. to Vice President, staff of 9. The line serves the Midwest, Southeast and Southwest with first-track mileage of 5,000 and multiple track or CTC mileage of 1,163. The 26 industrial sites for sale total 2,000 acres; all have rail sidings . . . A, B3-10, C, D, F, G, H, I, K, L, N, 01-3.

Wabash Railroad Company, Railway Exchange Building, St. Louis 1, Missouri; H. H. McIntyre, Manager Industrial Development, staff of 2. Serves the North Central States from Michigan to Missouri and Iowa; first track mileage is 2,429 and multiple track or CTC mileage is 861. Annual freight traffic totals 22 million tons and 6.5 billion ton-miles. Special facilities include ramps at 9 major cities for interchange of rail-truck traffic. The railroad has 3,000 acres of industrial sites in 39 tracts with rail sidings available to all . . . A, B1-10, C, F, G, H, I, J, K, L, N, 01.

MONTANA

Butte, Anaconda and Pacific Railway Company, P. O. Box 1421, Anaconda, Montana. Railway serves Butte and Anaconda, Montana, with first track mileage totaling 25. Total tonnage carried is 9,813,683. Railway has good interchange facilities with four major trunk line railroads. Does not operate a department devoted specifically to industrial development activities. Industrial sites available for lease only.

NEBRASKA

Union Pacific Railroad, 1416 Dodge Street, Omaha 2, Nebraska. Serves 11 Middle and Far Western states from Omaha and Kansas City to the Pacific; first-track mileage totals 9,743. Industrial development headed by A. C. Ritter, General Manager of Properties.

NEW JERSEY

Pennsylvania-Reading Seashore Lines, 22 Federal Street, Camden, New Jersey. Lines serve six counties of Southern New Jersey comprising Camden, Atlantic, Cape May, Cumberland, Salem and Gloucester Counties, with first track mileage totaling 338. Total tonnage carried is 5,180,529. Jointly owned line of the Pennsylvania Railroad and Reading Company interchanging at Camden with parent companies. Operates full-time industrial development department, of which C. W. Omrod is director. Four industrial sites available, totaling 900 acres, all served by rail sidings.

NEW YORK

The Dansville and Mount Morris Railroad Company, Dansville, New York. Railroad serves Livingston County, New York State, with first track mileage totaling 9. Total tonnage carried is 54,533. No industrial development department. No industrial sites available.

Delaware and Hudson Railroad Corporation, D & H Building, Plaza, Albany 1, New York; K. C. Lewis, Manager of Real Estate and Industrial Development, and staff of 2. The line's 706 miles of first track extend from western Vermont across eastern New York to northeastern Pennsylvania; there are 164 miles of multiple or CTC track. Tonnage is 15.7 million and ton-miles total 3.13 billion. Facilities include auto carriers, special cars, piggyback and a port railroad. The 14 industrial sites for sale total 720 acres; ten per cent have sidings.

Fonda, Johnstown and Gloversville Railroad Company, 111 West Fulton Street, Gloversville, New York. Railroad serves Fulton County, New York State, with first track mileage totaling 20. Total tonnage carried is 85,364. Special facilities include connections with New York Central Railroad at Fonda, New York — freight interchange yard. Information regarding industrial development activities may be obtained from Howard C. Miller, General Manager. Four industrial sites available for sale; 3 with structure, 130 acres, all served by rail sidings.

The Lehigh and Hudson River Railway Company, P. O. Box 286, Warwick, New York, First track mileage totals 96, with total tonnage of 3,610,000. No department devoted specifically to industrial development activities.

New York Central System (includes Boston and Albany, Michigan Central, C., C., C., and St. L. and others), 466 Lexington Avenue, New York 17, New York. Railroad serves Northeast from Boston and New York to Chicago and St. Louis; 10,151 miles of first-track. Otto W. Pongrace is Director of Industrial Development.

NORTH CAROLINA

Atlantic Coast Line Railroad, Wilmington, North Carolina (headquarters in process of moving to Jacksonville, Florida). Serves Virginia, the Carolinas, Georgia, Florida, and Alabama; first-track mileage totals 5,610. Industrial development headed by R. P. Jobb, Assistant Vice President, Industrial and Agricultural Development.

High Point Thomasville and Denton Railroad Company, High Point, North Carolina. Railroad serves High Point, Thomasville and Denton in Piedmont North Carolina (Guilford and Davidson Counties), with first track mileage totaling 34. Operates full-time industrial development department, of which T. C. Kirkman is director. No industrial sites available for sale at present. Developing industrial park of some 68 acres — land held by Winston Land Company — development being held up for policy determination.

Laurinburg and Southern Railroad Company, Laurinburg, North Carolina. Railroad serves Scotland and Hoke Counties, North Carolina, with first track mileage totaling 27.46. Total tonnage carried is 210,852. No department devoted specifically to industrial development activities. Industrial sites are available and rail sidings will be constructed as needed. J. W. Hollis, General Manager, is contact.

Piedmont and Northern Railway Company, 422 South Church Street, Charlotte, Thomas G. Lynch, Director of Industrial Development and Public Relations, staff of 2. The line serves the Piedmont section of North and South Carolina; first track mileage is 126. Freight traffic totaled 105,057 carloads in 1960. Special facilities include interchange traffic with Seaboard, Clinchfield, Georgia & Florida and Southern railroads. The railroad has 600 acres of industrial sites for sale with rail sidings. . . . A, B1-10, C, F, G, H, K, L, 02.

OHIO

Erie-Lackawanna Railroad Company, Midland Building, Cleveland, Ohio. Railroad serves New York City to Rochester, Buffalo, Cleveland, Dayton, Cincinnati and Chicago, with first track mileage totaling 2,239. Total tonnage carried is 27,260,812. Special facilities include piggy-back plans I, II, and III. Facilities at New York Harbor for import and export traffic. Iron ore handling facilities at Cleveland, Ohio. Full-time industrial development department, which is headed by D. M. Lynn; A. C. Hopkins heads Eastern District at 115 Observer Highway, Hoboken, New Jersey.

The New York, Chicago and St. Louis Railroad Company (Nickel Plate Road), Cleveland, Ohio. Railroad serves the Great Lakes — Midwest, with first track mileage totaling 2,170.40. Total tonnage carried is 41,182,080. Operates full-time industrial development department, which is headed by M. H. Markworth.

OKLAHOMA

Midland Valley Railroad Company (MV), Kansas, Oklahoma and Gulf Railway Company (KOG), and Oklahoma City-Ada-Atoka Railway Company (OCAA), Muskogee, Oklahoma; L. H. Hammond, Assistant Vice President, conducts area development activities for all three. First-track mileage is 333 (MV), 328 (KOG) and 104 (OCAA); most of it is in Oklahoma, with the remainder in Kansas, Arkansas and Texas. Tonnage is 850,000 (MV), 2.8 million (KOG) and 353,000 (OCAA); ton-miles are 97 million (MV), 495 million (KOG) and 20 million (OCAA). There are 9 industrial sites for sale, all with sidings, totaling about 450 acres. A, B1-7, B9, B10, C, F, G, H, K.

Northeast Oklahoma Railroad Company, 400 North Main, Miami, Oklahoma. Railroad serves Miami, Oklahoma to Baxter

RAILROADS

Springs, Kansas to Carous, Kansas, with first track mileage totaling 45. Total tonnage carried is 974,550. Operates part-time industrial development department, which is headed by I. R. Estus. No industrial sites available for sale.

OREGON

City of Prineville Railway, Prineville Oregon. Railway serves Crook County, Oregon, with first track mileage totaling 19. Total tonnage carried is 236,000. Special facilities include team tracks. Industrial development activities are handled by C. C. McGlenn, Manager, 5 industrial sites available for sale, totaling 52 acres, all served by rail sidings.

PENNSYLVANIA

Bessemer and Lake Erie Railroad Company, 1800 Frick Building, P. O. Box 536, Pittsburgh 30, Pennsylvania. E. J. Smith, Jr., Manager, Industrial Development, and a staff of 3. The line has 203 miles of first track extending from the Pittsburgh area to Erie, Pennsylvania and Conneaut, Ohio. Freight traffic totals 20 million tons and 2-1 billion ton-miles. There are two piggyback terminals and Great Lakes port terminal for bulk and general cargo. The 25 industrial sites for sale total 1,500 acres; 35 per cent of the sites have rail sidings. A, B1-10, C, D, F, G, H, I, K, L, M, N, 01, 02, 04.

Lake Erie, Franklin & Clarion Railroad Company, 27 Ninth Avenue, P. O. Box 430 Clarion, Pennsylvania; A. D. Himes, Executive Vice President. Serves Clarion County, first-track mileage is 15. Annual freight traffic is 729,188 tons and 3.48 million ton-miles. The railroad has a joint interchange with the New York Central and Pennsylvania Railroad. It has 8 industrial sites totaling 250 acres for sale, 25 percent of which have rail siding . . . A, B1-10, F, G, H, I, J, K, L, N, 02.

The Pennsylvania Railroad Company, Transportation Center, Six Penn Plaza, Philadelphia, Pennsylvania. Railroad serves east of the Mississippi; north of the Ohio, to Atlantic Seaboard excluding New England, with first track mileage totaling 9,895. Total tonnage carried is 163,870,000. Has every known type of interchange facility. Operates full-time industrial development department, of which R. W. Grigg is manager. Numerous industrial sites available, totaling 12,550 acres.

The Pittsburgh and Lake Erie Railroad Company, Pittsburgh and Lake Erie Terminal, Pittsburgh, Pennsylvania. Railroad serves western Pennsylvania, northeastern Ohio, with first track mileage totaling 221. Total tonnage carried during 1959 was 21,962,230. Special facilities include rail-barge transfer facilities — Colona (near Monaca, on Ohio River), Pennsylvania. Operates full-time industrial development department, of which Arthur Longini is director. Industrial sites available for sale, all served by rail sidings.

Pittsburgh and Shawmut Railroad Company, 132 North McKean Street, Kittanning, Pennsylvania. Railroad serves Lower Allegheny River in Pittsburgh District, with first track mileage totaling 110. Tonnage carried totals 1,500,000. Operates full-time industrial development which is headed by Thomas W. Corbett. Railroad has 11 industrial sites available for sale, totaling 1,600 acres, 10% served by rail sidings.

Reading Company, 620 Reading Terminal, Philadelphia 7, Pennsylvania. Serves eastern Pennsylvania and parts of New Jersey and Delaware; first-track mileage is 1,286 and tonnage carried is 54,751,088. Operates full-time Industrial Development Department headed by F. X. McBrearty.

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DAVLIN HEADS NEW SLATE OF AIDC OFFICERS:

WILLIAM R. DAVLIN

The American Industrial Development Council, an international association of development specialists, has elected William R. Davlin, Pennsylvania Secretary of Commerce, as the 1961-62 president.

In other elections for top officers at the annual meeting held in Dallas, Melvin D. Peach, Executive Assistant, The New England Council, was named first vice president; Thomas W. Finney, Vice President of Industrial Development, First National Bank in Dallas, was chosen as second vice president; and Paul W. Miller, Manager, Industrial Bureau, Atlanta Chamber of Commerce, was elected treasurer. J. Huber Denn, Industrial Commissioner, Delaware State Chamber of Commerce, is the Council's secretary-assistant treasurer and the operating officer of the group.

President Davlin immediately appointed key committee chairmen and made plans to further the Council's programs to raise the professional standards of its members.

The following members were appointed chairmen of these respective committees: Robert P. Lee, Constitution and By-Laws; Stuart Parry Walsh, Editorial Board; Lewis M. Holland, "Fellow in Industrial Development" Awards; Charles G. Crabb, Honorary Life Membership; Ray C. Hartman and E. P. Hanak, Local Arrangements for Cleveland Conference; William W. Gordon, Membership-Admissions; Lionel S. Baldin, Planning; Christy Payne, Jr., Program for Cleveland Conference; Bernard B. Blier, Publicity and Public Relations; and Albert E. Redman and Harold C. Kniebusch, Zoning.

MELVIN D. PEACH

THOMAS W. FINNEY

PAUL W. MILLER

J. HUBER DENN

RAILROADS

Manager. Twelve industrial sites are available for sale, all with sidings; total acreage is 1,084. Special services include assistance in relocation to plants displaced by redevelopment and highway programs and engineering assistance in designing plant layouts.

Strasburg Railroad, Box 70, Strasburg, Pennsylvania. Railroad serves Paradise and Strasburg Townships, Pennsylvania, with first track mileage totaling 4.5. Tonnage carried totals 5,000. Standard facilities with P.R.R. at Leaman Place, Pennsylvania. Operates part-time industrial development department, which is headed by Irl A. Daffin; one 40-acre industrial site available for sale, not served by rail siding yet.

TENNESSEE

Clinchfield Railroad Company, Erwin, Tenn.; Thurman B. Martz, General Industrial Agent, staff of 2. Serves eastern Kentucky, southwest Virginia, east Tennessee, west North Carolina and northwest South Carolina; first track mileage is 302 and multiple track or CTC mileage is 277. Annual freight traffic totals 13.5 million tons. The railroad has 5 industrial sites for sale totaling 1,000 acres, all with sidings. . . . A, B1-10, C, F, G, H, K, M, N, 02, 04.

Tennessee, Alabama and Georgia Railway Company, 200 East Tenth Street, Chattanooga, Tennessee. Railway serves area between Chattanooga, Tennessee and Gadsden, Alabama, with first track mileage totaling 93. Tonnage carried totals 1,152,910. Operates part-time industrial development department, which is headed by Garrison Siskin. Railway has several industrial sites available, totaling 50 acres, 50% served by rail sidings.

TEXAS

St. Louis Southwestern Railway Company (Cotton Belt), P. O. Box 959, Tyler, Texas; R. D. Klein, Manager of Industrial Development, and a staff of 8. The line runs from St. Louis southward to eastern Arkansas and thence southwest to Pine Bluff, Tyler, and Waco, with branches to Shreveport and Dallas; there are 1,554 miles of first track and 628 miles of multiple track or CTC. Freight traffic totals are 12.1 million tons and 4.75 billion ton-miles. The 15 industrial sites for sale total 820 acres; 85 per cent of the sites have sidings. A, B2-5, B7, C, D, F, G, H, I, K, 01, 02.

Texas City Terminal Railway Company, P. O. Box 591, Texas City, Texas. The line has 6 miles of first track and 29 miles of terminal track in the Texas City area. It has facilities to transfer box cars and containers to Seatrain Lines, Inc. The four industrial sites for sale have a total area of more than 200 acres; 15 per cent of the area is served by siding. B7, F, G, I, J, K, L, 01, 02.

The Texas Mexican Railway Company, Laredo, Texas. Railway serves Laredo, Texas to Corpus Christi, Texas, with first track mileage totaling 161. Tonnage carried totals 1,338,144. No industrial development department. No industrial sites for sale.

The Texas and Pacific Railway Company, Fidelity Union Tower, Dallas 1, Texas. Harry W. Clark, Director, staff of 6. Serves Louisiana, Texas and southwestern New Mexico; first track mileage is 1,825 and multiple track or CTC mileage is 400. Annual freight traffic totals 15.6 million tons and 4.4 billion ton-miles. Piggyback service is provided. The railroad has 24 industrial sites for sale totaling 1,059 acres with 50 percent rail siding . . . A, B2-10, C, D, F, G, H, J, L, N, 02.

RAILROADS

VIRGINIA

Norfolk Southern Railway, 405 Union Station Building, Norfolk, Virginia. Railway serves North Carolina and Tidewater, Virginia, with first track mileage totaling 592. Tonnage carried totals 4,989,808. Operates full-time industrial development department, which is headed by J. Milton Dillard. Railway has approximately 12 industrial sites for sale, totaling approximately 200 acres, all can be served by rail sidings.

Norfolk and Western Railway Company, 106 North Jefferson St., Roanoke, Virginia; H. P. Cotton, Assistant Vice President, and a development staff of 15. The railroad, which includes the former Virginian Railway, has 2,747 miles of first track in Maryland, Virginia, West Virginia, North Carolina, Kentucky and Ohio; there are 624 miles of multiple track and 1,440 miles of CTC. Freight traffic amounts to 78.9 million tons, carried 22.1 billion ton-miles. Special facilities include coal loading piers at Lamberts Point (Norfolk); barge loading at Kenova, West Virginia; Merchandise piers in Norfolk, and loading piers for TrucTrains at Norfolk, Durham, Winston-Salem, Roanoke, Bristol, Columbus and Cincinnati. The 31 industrial sites for sale have a total acreage of 3,300; ten per cent of them have rail sidings. A, B1 through B10, C, D, F, G, H, I, J, K, L, M, N, 01 through 04.

Seaboard Air Line Railroad Company, 3600 West Broad Street, Richmond 30, Warren T. White, Asst. Vice President, staff of 5. Serves Virginia, North and South Carolina, Georgia, Florida and Alabama; first track mileage is 4,145. Annual revenue freight totals 52.2 million tons and 9.9 billion ton-miles. The railroad has numerous industrial sites for sale, all of which are served by rail sidings . . . B2-10, C, F, G, H, J, K, L, 01-2.

WEST VIRGINIA

Chesapeake and Ohio Railway Company, Room 1103 C & O Building, Huntington 1, West Virginia; Wayne C. Fletcher, Director of Industrial Development, and a staff of 30. The 5,091 miles of first track serve Virginia, West Virginia, Kentucky, Ohio, Indiana, Michigan and southern Ontario. Special facilities include coal and ore piers at Newport News and Toledo and piggyback terminals at Staunton, Charleston, Huntington, Cincinnati, Detroit, Saginaw, Buffalo and Chicago. There are many industrial sites for sale, some with rail sidings. A, B1-7, B9, B10, C, D, F, G, H, K, L, 01, 02.

West Virginia Northern Railroad Company, Kingwood, West Virginia. Railroad served Central Preston County, West Virginia, with first track mileage totaling 17. Tonnage carried totals 1,028,577. No industrial development department. J. D. Everly, General Manager, is contact. Railroad has 1 25-acre industrial site available for sale, served by rail sidings.

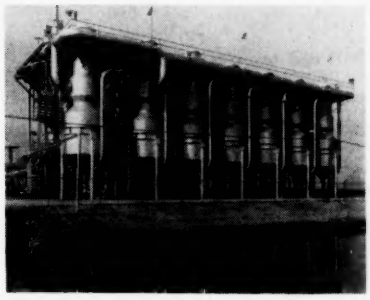
CANADA

Canadian National Railways, 407 McGill Street, Montreal, Quebec. Serves all ten provinces of Canada and has lines in the United States to Chicago, Duluth, Portland (Maine), and New London (Connecticut); tonnage carried is 82,035,539. Operates full-time industrial development department with staff of 35, headed by D. F. Purves, Chief of Development. Industrial sites available for sale.

Canadian Pacific Railway Company, Windsor Station, Montreal, Quebec. Railway serves all of Canada. Tonnage carried totals 57,878,732. Special facilities include piggy-back, trucking. Operates full-time industrial development department, of which F. W. Collins is manager. Industrial sites available for sale.

I. D. BRIEFS

FREEPORT, TEXAS. The search for an economical method of producing fresh water from the sea took a giant step forward here recently when the federal government's first experimental conversion plant successfully completed its design production test. Conducted by Chicago Bridge & Iron Company, prime contractor for the plant, the test period covered eight consecutive days during which eight million gallons of potable water were produced from the Gulf of Mexico.



The new plant is designed to produce one million gallons of fresh water daily at a cost of less than $1 per thousand gallons. The view in this picture shows seven of twelve large evaporators, key units in the conversion process. The Interior Department's Office of Saline Water revealed that the pioneering plant is serving residents of Freeport and two nearby Dow Chemical Company plants.

* * *

MENLO PARK, CALIFORNIA. A new information service for business managers and planners has been announced by Stanford Research Institute. Called the Industrial Economics Handbook, it brings together all aspects of the U. S. Economy, with specific attention to changes and developments in individual sectors. Under the Handbook concept, information will be kept up to date, and provision will be made for measuring and comparing growth rates on a continuing basis.

LAS VEGAS. R. Julian Moore, manager, Basic Management, Inc., has been elected president of the Southern Nevada Industrial Foundation, Inc., for a third term. Other officers named at the annual meeting here are Harold G. Laub, president, Southwest Gas Corporation, and E. Parry Thomas, executive vice president of the Bank of Las Vegas, vice president; Dwight H. Gravett; manager Eastman Dillion, Union Securities & Company, secretary; Cyril S. Wengert, vice president of Southern Nevada Power Company, treasurer, and W. Bruce Beckley, attorney, assistant secretary and treasurer. Andrew V. Ruckman was reappointed managing director.

* * *

ATLANTA. Clayton D. McLendon has announced establishment here of Industrial Realty, Inc., to market southern real estate for industrial use and to serve companies on a nationwide basis seeking new plant sites. The firm will specialize in plant and warehouse locations. Well known in the industrial development field, Mr. McLendon resigned a vice presidency of the Citizens & Southern National Bank of Georgia to set up the new company. He also served for several years as executive director of the Columbus, Georgia Chamber of Commerce.

* * *

FRESNO. The Fannin Corporation has just issued a handsome brochure on its planned industrial community in this California city. The new district is called Fresno Air Terminal Industrial Park, and the company is now leasing or selling 10,000 to 50,000 square-foot buildings, or will build to specifications. Officials of Fannin said the organization's plans are to construct

(Continued on Page 86)

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METROPOLITAN ATLANTA — Nine Industrial Districts offering planned sites of varying location, size, price. Services available: (a) optional, (c) (e) (g) (f) optional, (p) (r) (s) (t) (w). For data on these and other sites at Atlanta contact F. Wm. Broome (member, AIDC) Manager, Committee of 100 DeKalb County. P. O. Drawer 759, Atlanta 22, Ga. Telephone 378-3691.

Florida

Perini Industrial Park, located at West Palm Beach on the main line of Seaboard Railroad. Available services (a), (c), (e), (g), (f), (p), (r), (s), (t), (w) — Write — Paul F. Hrabko, P. O. Box 1071, W.P.B. Phone TE 3-4533.

Illinois

ILLINOIS INDUSTRIAL VALLEY: Cities of La Salle, Peru, Oglesby, Spring Valley, Ladd, DePue offer planned industrial sites. Excellent transportation via the Illinois River, 7 major railroads, numerous carriers. 2 U.S. Highways. Skilled workers. Power in abundance. Active ID organization to serve you. Robert Blomgren, Director. Box 446, La Salle, Illinois. Phone: CA. 3-0227. Services: (a) optional, (c), (e), (f) optional, (g), (p), (r), (s), (t), (w).

Iowa

IOWA "MANUFACTURING MEADOWS"— Clinton, Iowa (population 35,000). 138 miles west of Chicago on Mississippi River and Lincoln Highway (U. S. 30). 190 acres within city. Master plan by Skidmore, Owings & Merrill. Served by Chicago and North Western Railroad. Developed by Clinton Development Company, a civic-non-profit corporation. CHapel 2-4536. R. J. Stapleton, Managing Director. Services available: (a) (optional), (c), (e), (g), (f) (optional). (p), (r), (t), (w), restrictions.

CALGARY, CANADA — Highfield Industrial Park in Canada's oil, gas centre. Industrial sites in city-developed district. Package price $6,750 acre. Services: (e), (g), (r), (s), (t), (w). Apply K. S. Ford, Industrial Co-ordinator, City Hall, Calgary, Alberta, Canada.

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Stewart G. Neel, *Manager*

BRIEFS

(Continued from Page 83)

one new industrial building each month during 1961. Fannin is a subsidiary of T. J. Bettes Company, Houston, which engineers, constructs, leases, finances and sells modern industrial park buildings in California, Arizona, New Mexico, Texas, Oklahoma and Arkansas.

* * *

LINCOLN, NEBRASKA. Western Power & Gas Company, surviving corporation resulting from the merger of Southern Colorado Power Company into Central Electric & Gas Company, has named Judson Large it's new president and chief executive officer. Carl J. Olson serves as executive in charge of the company's area development activities.

* * *

SALT LAKE CITY. Earle L. Beardsley has been appointed Industrial Director of the Keystone Insurance & Investment Co. here. Mr. Beardsley was formerly Director of Industrial Development of the Denver and Rio Grande Western Railroad Company.

* * *

DALLAS. A complete village within a city has been planned by the Caroline Hunt Trust Estate which will include facilities for industrial plants, residential areas and recreational opportunities. Named "Skyline Industrial Village", this new development is in Mesquite, Texas, located on the boundary of Dallas County.

* * *

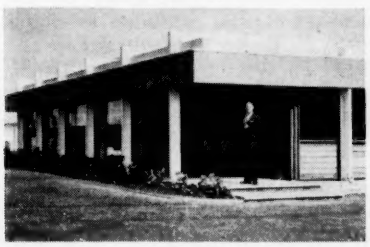
An innovation in leasing capital equipment has been announced by American Buildings Company of Columbus, Georgia. The company now offers a new "building package plan" consisting of pre-engineered, post-free buildings (which several other companies also offer) and installs all required machinery and equipment (which is actually the innovation), all on a lease basis. Not only does American design and build the building to the manufacturer's specifications, but also installs all machinery and equipment necessary for the operation of the plant. Thus, the tenant simply moves in and begins operations immediately. Called the Amer-Lease Plan, no outright purchases are demanded, but a lease-purchase option is available under the plan.

BRIEFS

ROCHESTER, N.Y. Plans to invest approximately $70 million during 1961 for additions, replacements and improvements in its U.S. facilities have been announced by Eastman Kodak Company. The capital expenditure budget is the same as that for 1960, which was the company's largest annual budget to date. During the past five years, officials said, Kodak has invested slightly more than $311 million in capital improvements. All of this has been accomplished on a pay-as-you-go basis, without borrowing, and the company remains debt free. The 1961 expenditures will again come from company funds.

* * *

Britain's first American style Drive-In Restaurant was opened recently just south of London at Farnborough on the Hastings road. Named the "Ox-in-Flames" this unit is the first of a chain planned for Davidson Drive-Ins Limited, a company financed and promoted by a group of Minnesota business men. With the highest number of vehicles per head in Europe and restaurant facilities for the motorist almost nonexistent, Britain is the obvious choice for the launching of this enterprise later to be extended to other countries of Western Europe.



The initial research and enquiry in Britain, the site selection and the piloting of the new firm was undertaken by a consultant, Mr. W. J. Shaw of Bakers Farm, Horsham, Sussex. Mr. Shaw, seen here at the entrance to the "Ox-in-Flames" has been appointed Managing Director of the new company.

* * *

A recent visit to Consolidated Natural Gas System in Pittsburgh brought an ID staff member into a meeting of the company's development executives who were discussing re-organization plans. Major emphasis is being given to the training of personnel to work with industrial-

(Continued on Page 88)

RECENT RELEASES

By Suzanne Johnson

GENERAL REPORTS

Industrial Districts Restudied — An Analysis of Characteristics by Robert E. Boley. Essentially, this report is concerned with characteristics of industrial districts, not as they should be but as they are. Basic data from 272 industrial districts throughout the United States and Canada are examined in detail, with particular emphasis on district sponsorship and its relation to district location, size, and occupancy characteristics.

The study also compares and contrasts site sizes, building sizes, site coverage ratio, employment per establishment, and employee densities of manufacturing vs. non-manufacturing occupants of industrial districts. Technical Bulletin 41. Urban Land Institute, 1200 - 18th Street, N.W., Washington 6, D. C. 1961, 77 pages, $5.

Land Use and Its Patterns in the United States by F. J. Marschner. The purpose of this study was to contribute to a more mature understanding of the patterns of rural land uses in the United States. The underlying physical factors are described, and their influence is explained in relation to major historical and still evolving institutional determinants of agricultural development and land use. The varied and unequal impacts of industrialization and of the continuing technological revolution within agriculture are emphasized. Superintendent of Documents, Government Printing Office, Washington, 25 D. C. 1959, 277 pages.

Store Location and Development Studies by William Applebaum, Saul B. Cohen, Bart J. Epstein, Howard L. Green, Ronald R. Imus, and Jack C. Ransome. Economic Geography, Clark University, Worchester, Mass. 1961, 95 pages, $2.

AREA REPORTS

The Erie Workbook for Community Development Action. This Workbook is a written record of the steps taken by community leaders of Erie, Pa., in the organization of a program for balanced community development. The program is based on principles and procedures set forth in the "Community Development Series" published by the U.S. Chamber of Commerce and while the primary purpose was to formulate a work program for the community of Erie, the resulting publication can be useful as a guide for other communities. Greater Erie Chamber of Commerce, 134 West 10th Street, Erie, Pennsylvania. 1960, 451 pages.

Economic Growth Projections for the Dallas, Fort Worth, and Houston Trading Areas by C. P. Blair. Bureau of Business Research, University of Texas, Austin, Texas. 1961, 121 pages, $2.

Industrial Site Guide. Chicago and North Western Railway, Director of Industrial Development, 400 West Madison Street, Chicago, Illinois. 1961, 14 pages.

The California Economy: 1947-1980. The study provides basic information on expected developments in the State's economy in terms of industrial growth, regional development, and population increases. It contains an analysis of employment in every major sector of economic activity in the state. Stanford Research Institute, Menlo Park, California. 1961, 456 pages, $10.

Income and Employment in New Mexico, 1949-1959 by Ralph L. Edgel and Vincente T. Ximenes. Bureau of Business Research, University of New Mexico, Albuquerque, New Mexico. 1960, 76 pages, $5.

EXPANSION PLANNING INDEX

American National Bank and Trust Company, Mr. Scott L. Probasco, Jr., Assistant to the President, Chattanooga, Tennessee. (Ad page 65)

Area Industrial Development Committee, Mr. Hugh McMarshall, Agent, City Square, Biddeford, Maine. (Ad page 22)

Atlantic Coastline Railroad, Mr. W. T. Rice, President, 500 Water Street, Jacksonville, Florida. (Ad page 79)

Baltimore County Industrial Development Commission, Mr. H. B. Staab, Director, County Office Building, Towson, Maryland. (Ad 4th cover)

Bangor Industrial Development Department, Mr. Peter D'Errico, City Hall, Bangor, Maine. (Ad page 5)

City of Belfast, Mr. Terry Sprenkel, City Manager, Town Hall, Belfast, Maine. (Ad page 4)

Bessemer and Lake Erie Railroad Company, Mr. E. J. Smith, Manager, Industrial Development, 1833 Frick Building, Pittsburgh 30, Pennsylvania. (Ad page 78)

Biddeford-Saco Chamber of Commerce, Inc., Area Industrial Development Committee, Mr. Hugh McMarshall, Agent, City Square, Biddeford, Maine. (Ad page 43)

Braintree Industrial Development Commission, Mr. Wm. G. Brooks, Chairman, 250 West Street, Braintree 84, Massachusetts. (Ad page 18)

Bristol Industrial Development Corp., Mr. M. C. Gravely, Jr., Executive Vice President, P. O. Box 1039, Bristol, Tennessee. (Ad page 66)

Brunswick Area Chamber of Commerce, Mr. Malcolm F. Fryer, Jr., 59 Pleasant Street, Brunswick, Maine. (Ad page 8)

Greater Burlington Industrial Corp., Mr. Charles D. Townsend, Executive Director, 191 College Street, Burlington, Vermont. (Ad page 18)

Chattanooga Industrial Committee of 100, Mr. James W. Hunt, Industrial Development Director, 819 Broad Street, Chattanooga, Tennessee. (Ad page 67)

Chicago, Rock Island & Pacific Railroad, Mr. P. J. Schmidt, Manager, Industrial Development, LaSalle Street Station, Chicago, Illinois. (Ad page 75)

Connecticut Development Commission, Mr. Leroy Jones, Managing Director, State Office Building, Hartford, Connecticut. (Ad page 21)

Town of Dover-Foxcroft, Mr. Bernard B. Moir, Co-Chairman, Industrial Development Committee, Dover-Foxcroft, Maine. (Ad page 13)

East Tennessee Industrial Council, Mr. H. W. Hollingsworth, President, La Follette, Tennessee. (Ad page 55)

Houlton Regional Development Corp., Mr. Aubrey A. McLaughlin, Industrial Director, 109 Main Street, Houlton, Maine. (Ad page 2)

Illinois Central Railroad, Mr. J. S. Frost, Manager, 135 East 11th Place, Chicago, Illinois. (Ad page 53)

Jackson-Madison County Chamber of Commerce, Mr. J. W. Perry, Manager, New Southern Hotel, Jackson, Tennessee. (Ad page 71)

Jackson Utility Division, Mr. Robert L. Raper, Industrial Representative, P. O. Box 611, Jackson, Tennessee. (Ad page 70)

Johnson City Chamber of Commerce, Mr. C. R. Strouse, Executive Vice President, 339 East Main Street, Johnson City, Tennessee. (Ad page 64)

Kingsport Press, Inc., Mr. F. S. Crosley, Press and Roller Streets, Kingsport, Tennessee. (Ad page 68)

Knoxville Chamber of Commerce, Mr. David D. Dickey, Industrial Director, Hotel Andrew Johnson, Knoxville 2, Tennessee. (Ad page 57)

Lebanon & Wilson County Chamber of Commerce, Mr. Don Webber, Executive Secretary, Lebanon, Tennessee. (Ad page 61)

City of Lewiston, Mr. Samuel Michael, Director, Industrial Development Department, City Hall, Lewiston, Maine. (Ad page 4)

Livermore Falls Trust Company, Mr. Reginald H. Sturtevant, President, Livermore Falls, Maine. (Ad page 4)

Loudon County Chamber of Commerce, Mr. George Appleton, President, P. O. Box 366, Loudon, Tennessee. (Ad page 56)

Maine Port Authority, Mr. Edward Langlois, General Manager, Maine State Pier, Portland, Maine. (Ad page 2)

Massachusetts Department of Commerce, Mr. John T. Burke, Commissioner, 150 Causeway Street, Boston, Massachusetts. (Ad page 17)

Nashville Chamber of Commerce, Mr. George G. Barbee, Industrial Director, 310 Union Street, Nashville 3, Tennessee. (Ad page 69)

New York Central System, Mr. Otto Pongrace, Director, Industrial Development, 466 Lexington Avenue, New York. (Ad 2nd cover)

Nickel Plate Road, Mr. C. B. Bennett, Terminal Tower, Cleveland 13, Ohio. (Ad page 81)

Odessa Chamber of Commerce, Mr. Ray W. Hedges, Executive Vice President, 211 West Third Street, Odessa, Texas. (Ad page 3)

State of Ohio, Department of Industry & Economic Development, Mr. Koder M. Collison, Director, State Office Building, Columbus, Ohio. (Ad 3rd cover)

Portland Area Development Council, Mr. Eugene S. Martin, Manager, 142 Free Street, Portland, Maine. (Ad page 8)

Prestige Park, (Tolland Enterprises), 672 Tolland Street, East Hartford 8, Connecticut. (Ad page 23)

Providence Re-Development Agency, Mr. Ed Palumbo, 10 Dorrance Street, Providence, Rhode Island. (Ad page 20)

Puget Sound Power & Light Company, Mr. Steward G. Neel, Manager-Area Development, 1400 Washington Building, Seattle 1, Washington. (Ad page 86)

Rutland Chamber of Commerce, Inc., Mr. Elbert G. Moulton, Managing Director, 1 Mead Building, Rutland, Vermont. (Ad page 24)

Sanford Springfield Chamber of Commerce, Mr. Wm. St. Onge, Executive Manager, 10 Washington Street, Sanford, Maine. (Ad page 14)

Seaboard Airline Railroad Company, Mr. Warren T. White, Assistant Vice President, P. O. Box 1620, Richmond 13, Virginia. (Ad page 81)

Smithtown Township, Mr. Richard S. De Turk, Director of Planning, Smithtown, Long Island, New York. (Ad page 11)

Springfield Chamber of Commerce, Mayor Travis Price, Bell Building, Springfield, Tennessee. (Ad page 68)

Stone Fort Land Company, Mr. Thomas Lupton, Jr., 118 East Eighth Street, Chattanooga, Tennessee. (Ad page 63)

State of Tennessee, Industrial Development Division, Mr. George L. Benedict, Jr., Assistant Commissioner, Cordell Hull Building, Nashville, Tennessee. (Ad page 72)

Thomasville Industrial Promotion and Expansion, Rear Admiral T. F. Halloran, USN, Thomasville, Georgia. (Ad page 3)

Union Pacific Railroad, Mr. A. C. Ritter, General Manager of Properties, 1416 Dodge Street, Omaha 2, Nebraska. (Ad page 77)

Vermont Development Department, Mr. Roland Vautour, Director, Industrial Development, Montpelier 50, Vermont. (Ad page 19)

OTHER:

American Creosote Works, Inc., For Waguespack Pratt, Inc., Mr. S. B. Braselman, Jr., Vice President, 1305 Dublin Street, New Orleans, Louisiana. (Ad page 45)

CLASSIFIED ..... **PAGE 86**

BRIEFS

ists and preparing the materials on the major economic factors affecting industrial location.

Shown here, left to right, are E. R. Seifert, Sales Manager, New York State Natural Gas Corporation; Emery D. Hoenshell, Manager of Community Services and Christy Payne, Jr., Manager of Market Development, both of the parent company, Consolidated Natural Gas; C. L. Yost, Industrial Development Manager and R. G. Bashore, Assistant Area Development Manager, both of The Peoples Natural Gas Company.

* * *

DEVELOPMENT-MINDED INDUSTRIALISTS IN THE NEWS:

Botany Industries, Inc., has announced the election of **Michael Daroff** as president and chief executive officer, succeeding **A. M. Sonnabend** who continues as chairman. . . . **Walter H. Feldmann,** president of Worthington Corporation, Harrison, N. J., has also been elected chief executive officer. . . . New in top jobs at Stone & Webster Service Corporation, New York, are **Peter J. Rempe,** board chairman and chief executive officer, and **Lucius S. Storrs, Jr.,** president. . . . **Robert Rittmaster** has been elected chairman of the Minneapolis-Moline Company. . . . Northam Warren Corporation, a highly diversified organization with manufacturing facilities in 32 countries, has named **Northam Warren, Jr.,** as president, succeeding his father who founded the firm in 1911. . . . **Fred G. Gronemeyer** has been promoted to the new position of vice president and executive director, industrial development, for the Chemstrand Corporation. In his new position he will be responsible for planning the expansion of the corporation's business areas into which manufacturing, marketing, research and development activities can be projected.

THREE BILLION DOLLAR VOTE OF CONFIDENCE

in the future of OHIO

To keep pace with Ohio's dynamic growth, the state's eight investor-owned electric power companies will spend three billion dollars in the coming decade to double capacity. As much new generating capacity will be provided in the next ten years as was built in the past seventy-five.

If you are seeking a plant site, these facts are important for two reasons. First, this is solid indication of the confidence electric utilities have in Ohio's future growth. Second, you can be sure there will be plentiful, dependable electric power for your industry. Today, Ohio's generating capacity is 10.6 million kilowatts, and this state is the number one user of electric power in the nation.

Additional information detailing vital plant site factors is yours for the asking. Send the coupon below on your letterhead for two new booklets of solid facts: Statistical Abstract of Ohio: 1960 and Ohio, The Growth State.

Koder M. Collison, Director
State of Ohio, Department of Industrial and Economic Development
700 Bryden Road Columbus 15, Ohio

Please Send:

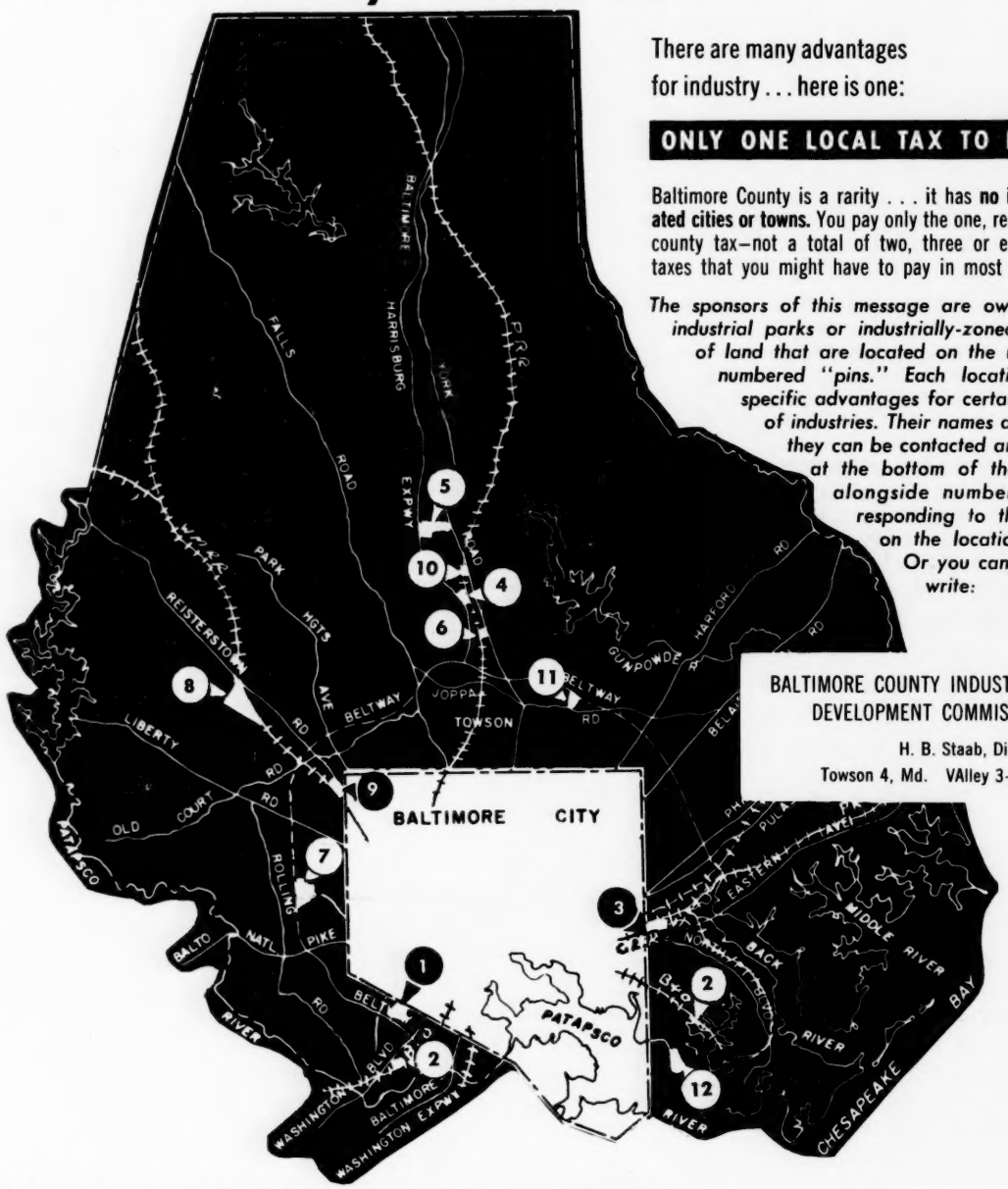
☐ Statistical Abstract of Ohio: 1960
☐ Ohio, The Growth State brochure

NAME _____ TITLE _____

BUSINESS ADDRESS _____

CITY _____ ZONE _____ STATE _____

Baltimore County has IT (INDUSTRIAL TEMPO)!



There are many advantages for industry . . . here is one:

ONLY ONE LOCAL TAX TO PAY

Baltimore County is a rarity . . . it has **no incorporated cities or towns.** You pay only the one, reasonable county tax—not a total of two, three or even four taxes that you might have to pay in most areas.

The sponsors of this message are owners of industrial parks or industrially-zoned tracts of land that are located on the map by numbered "pins." Each location has specific advantages for certain types of industries. Their names and how they can be contacted are listed at the bottom of the page alongside numbers corresponding to the ones on the location pins. Or you can call or write:

BALTIMORE COUNTY INDUSTRIAL DEVELOPMENT COMMISSION
H. B. Staab, Director
Towson 4, Md. VAlley 3-3000

For information concerning outstanding industrial sites, please contact:

1. **Arbutus-Halethorpe Area**
Samuel M. Pistorio
3908 Coolidge Avenue
Baltimore 29, Md. (CI. 2-0500)

2. Mr. Thomas G. Gordon
Industrial Agent
Baltimore & Ohio R.R.
Baltimore, Md. (LE. 9-0400)

3. **Canton Company of Baltimore**
300 Water Street
Baltimore 3, Maryland
(LE. 9-5126)

4. **Parker W. Frames, S. I. R.**
Industrial Specialists
Lord Baltimore Hotel
Baltimore 3, Md. (SA. 7-2284)

5. **Greater Baltimore Industrial Community**
414 York Road
Towson 4, Md. (VA. 3-3441)

6. Kilmarnock Associates
Kilmarnock Industrial Park
923 Munsey Building
Baltimore 2, Md. (SA. 7-1686)

7. **Meadows Industrial Park**
2406 Greenmount Avenue
Baltimore 18, Maryland
(HO. 7-4970)

8. **Owings Mills Industrial Park**
c/o Frank S. Nicoll, Jr.
Milford Mill Rd. & W. Md. R. R.
Baltimore 8, Md. (HU. 6-7000)

9. William F. Chew
Pikesville Industrial Park
Pikesville 8, Maryland
(HU. 6-8000)

10. **Ira C. Rigger, Inc.**
(N. Central & Texas Parks)
General Contractors
Cockeysville, Md. (NO. 6-1800)

11. Mr. Thomas W. Offutt
Towson Industrial Park
403 Washington Avenue
Towson 4, Md. (VAlley 5-7300)

12. **Sollers**
630 South Catherine St.
Baltimore 23,
Maryland

BALTIMORE COUNTY, MARYLAND—The golden horseshoe of industrial opportunity!

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